

LIFE



IN THIS ISSUE

THE DANGER OF WAR
AND OUR ABILITY TO FACE IT
—
CHURCHILL ON PEARL HARBOR
—
DEVELOPMENT OF THE BOMB;
PART 2 OF A SERIES

ATOMIC EXPLOSION

FEBRUARY 27, 1950

20

CENTS

YEARLY SUBSCRIPTION \$6.00



Youngsters prefer Peter Pan Peanut Butter

Here's Why

Peter Pan stays fresher and smoother

1. Packed fresher! Just seconds from grinder to jar. None of its delicious just-made flavor is lost!

2. Fresher when you buy it! It's vacuum-sealed to keep all the fresh flavor in. The *only* leading peanut butter with the flavor-guarding vacuum-sealed cap.

3. Stays fresher in your pantry, after you open the jar! The oil never separates—so Peter Pan doesn't get rancid, never gets dry or lumpy. It *stays* fresh-tasting and smooth—keeps all its energy value and vitamins. No waste—it's smooth and creamy right down to the bottom of the jar!

*It's America's Favorite because
it's America's Best*

Tune in "Sky King" every other weekday at 5:30 over your ABC station



Try both kinds of delicious Peter Pan
smooth Peter Pan in the Red Top Jar ● the smoothest
peanut butter made... and Peter Pan Crunchy Peanut Butter
(with crisp peanut bits mixed all through)
in the Green Top Jar ● The youngsters love 'em both!

Keep your **WHOLE** mouth **WHOLESOME!**



Your mouth and breath are more wholesome—sweeter, cleaner—when you guard against tooth decay and gum troubles *both*. So don't risk halfway dental

care. Take this vital precaution—use *doubly-effective* Ipana care* for healthier teeth, healthier gums—better all-around protection for your whole mouth!

Fight tooth decay and gum troubles Both!

Only one leading tooth paste is designed to give you this double protection*

If you want a healthier, more wholesome mouth, dentists warn you to take this most important precaution: *protect your gums as well as your teeth*.

For gum troubles not only cause more tooth losses than decay itself. Unhealthy teeth and gums **BOTH** actually breed unpleasant breath.

That's why you need to fight tooth decay and gum troubles **BOTH**—with *doubly-effective* Ipana care.

No other dentifrice has proved more effective than Ipana in fighting tooth decay. For every time, any time you use Ipana, you combat the bacteria that cause cavities.

And no other leading tooth paste is specially de-

signed to fight gum troubles, too. For Ipana's unique formula actually stimulates gum circulation—promotes healthier gums.

So get Ipana and get double protection—to help keep your *whole* mouth *wholesome!* You'll like that wholesome Ipana flavor, too. It's refreshing!

*Here's doubly-effective Ipana care

1. Between regular visits to your dentist, brush all tooth surfaces with Ipana at least twice a day.
2. Then massage gums the way your dentist advises. Ipana's formula reduces tooth decay, promotes healthier gums—helps keep your *whole* mouth *wholesome!* Get Ipana Tooth Paste today.



Healthier teeth, healthier gums... **IPANA** for Both!

This One



AWEP-NWK-B4RB

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New Giant-Oven Range

Amazingly Low-Priced! Compact! Thrifty!

New Proof—You Can't Match a FRIGIDAIRE Range!



Manufacturer's Suggested Cash Price for Model RM-30, Illustrated Above

ONLY

\$169⁷⁵

Prices include delivery and placement, warranty and Federal Excise Tax.
Local Tax and special wiring (if any) extra. Prices subject to change without notice.

Visit your Frigidaire Dealer—see the large, complete selection of Frigidaire Electric Ranges. Look for your Frigidaire Dealer's name in Classified Phone Directory. Or write Frigidaire Division of General Motors, Dayton 1, Ohio. In Canada, Leaside 12, Ontario.

Electric Ranges • Refrigerators • Automatic Washer • Clothes Dryer • Electric Ironer • Food Freezers
Electric Dehumidifier • Electric Water Heaters • Kitchen Cabinets and Sinks • Air Conditioners

FRIGIDAIRE
"Thrifty-30" Electric Ranges

HERE's a completely new and wonderful idea in electric ranges. A big range in everything that counts—extra oven space, striking beauty, Frigidaire quality construction, plus the important cooking advantages of much more

costly ranges. It's perfectly sized for today's smaller kitchens, but has enough cooking capacity for big harvest meals. Yet this new Frigidaire "Thrifty-30" Electric Range is only 30 inches wide—and sensationally low in price!

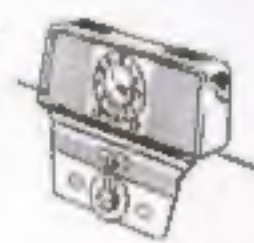
Look What's New Outside!
Look What's New Inside!

NEW Thrifty Giant Oven—biggest in any household range—6,200 cubic inches—big enough for 6 pies! Heavily insulated on all 6 sides—cooks more food with no more current! Oven stretches clear across the range—provides more space up front. One-piece oven—porcelain rust-proof finish. Sliding shelves adjust to 5 positions. Counterbalanced shelf-type door.

NEW Beauty—styled by Raymond Loewy. Striking slanted front—high back panel—one-piece Flowing-Top of acid-resisting porcelain. The snowy-white Lifetime Porcelain finish, even on the sides of the range, is rust-proof, won't discolor, wipes clean with a damp cloth. The switch knobs are out in front—they're easy to read and easy to use.

NEW High-Speed, Waist-High Broiler gets steaks just right! The speedy broiler unit is recessed in oven top—out of the way. Porcelain broiling pan—easy to clean.

NEW Cook-Master (on Model RM-35, shown below) combines in one unit the controls for automatic oven cooking, a Cooking-Top Lamp, and kitchen clock. Handsome styling, set off by gleaming chromium trim.



NEW 5-Speed Radiant Tube Cooking Units cook faster—use less current. 4 standard-size units—including an extra-big one. Units swing up and porcelain drip trays lift out for easy cleaning.



NEW Super-Size Utensil Drawer (on Model RM-35) Full-width—located right below the oven. Glides silently on triple Nylon rollers.



This emblem on a Frigidaire Electric Range is your assurance of the same measure of outstanding convenience, economy, dependability and beauty that has made the Frigidaire Refrigerator America's No. 1 Refrigerator.

Model RM-35—with Cook-Master and Utensil Drawer
Manufacturer's Suggested Cash Price \$199.75



A STORY WITH AN O. HENRY ENDING

The Telephone Operator who Saved a Life

**JUST AS HER OWN LIFE HAD BEEN
SAVED TWENTY YEARS BEFORE BY
ANOTHER OPERATOR**

(From a recent broadcast of the radio program,
"The Telephone Hour.")

TWENTY years ago in the busy town of Vineland, New Jersey, Nicholas and Tessie Pennino and their two-year-old daughter, Marjorie, were nearly asphyxiated by coal gas fumes from a stove in their home. Mother and daughter were both unconscious when Mr. Pennino managed to crawl to the telephone and ask faintly for help before he, too, was overcome by the deadly fumes.

A fast-thinking telephone operator for the New Jersey Bell Telephone Company received

his call, realized something was wrong, and notified a doctor. Because of that operator's alertness, baby Marjorie and her parents recovered.

But that's not the end. There's a sequel—a sequel that was played nearly twenty years later. It took place in the same kind of setting—a home filled with poisonous gas—a weak voice calling into a telephone for help, and a telephone operator on the other end who knew just what to do. The cast was different except for the principal player. For this time the operator who traced the desperate call,

found the exact location of the house, and notified the police in a matter of minutes, was none other than Marjorie Pennino.

Yes, Marjorie Pennino had grown up and joined the Telephone Company shortly after her graduation from Vineland High School. And so twenty years later, by the same kind of quick thinking that had helped to save her own life, Marjorie helped to save the life of another.

A story with an O. Henry twist, yes! But a true one! And one we think is a pretty good illustration of how telephone people like to give "that extra touch of helpfulness."



Miss Marjorie Pennino and Tom Shirley, radio announcer. Miss Pennino received an ovation from the studio audience when she was introduced after the radio broadcast.

"THE TELEPHONE HOUR" WITH THE BELL TELEPHONE ORCHESTRA AND FAMOUS GUEST SOLOISTS, IS BROADCAST EVERY MONDAY NIGHT OVER THE NBC NETWORK. **BELL TELEPHONE SYSTEM**



Lovely lady...Lovely hair...

She's a "Rayving Beauty" now!

"My Rayve Home Permanent is the loveliest wave I ever had"
says **Ruth Bride**

CHARMING NEW YORK MODEL

"A model's hair has to look gleaming and natural and perfectly groomed every day. You can't fool the camera! My Rayve Home Permanent left my hair so satin-soft and so easy to set. I'm truly thrilled with it."

WANT TO TRY MISS BRIDE'S SMART HAIR-DO?
Write Janet Wakefield, Dept. L, 80 Varick St., Pepsodent, New York 13, N. Y., for easy directions.



Faster-faster...yet the Dial-a-Wave makes it so sure!

Rayve's exclusive Dial-a-Wave shows you instantly the fastest waving time for the condition and texture of your hair. No guessing about how long to leave the waving lotion on to get just the amount of curl you want!

Rayve lasts longer...yet looks lovelier from the start!

Your Rayve wave will shimmer with highlights... and almost set itself! No frizzy ends, ever... for Rayve's improved waving lotion is so much gentler, safer for hair. And because it's timed individually for you, your Rayve permanent stays lovely weeks longer!

WHAT ABOUT CURLERS? Use any plastic curlers you have... for Rayve's lovelier results come from the gentler solutions and individual Dial-a-Wave timing.

It's easy to be a "Rayving Beauty" with a **Rayve Home Permanent**

LETTERS TO THE EDITORS

COLLEGE FRATERNITIES

SIRS:
MADISON SIGS UNANIMOUSLY EXTEND A MOST SINCERE AND APPRECIATIVE THANK YOU FOR YOUR OUTSTANDING STORY ON OUR CHAPTER ("COLLEGE FRATERNITIES," LIFE, FEB. 6). IT WAS ENTHUSIASTICALLY RECEIVED BY ALL SIGS THE COUNTRY OVER.

WORTHY LORDS OF SIGMA CHI
MADISON, WIS.

Sirs:
This is to express my pleasure and appreciation for the mention and photograph included in LIFE's fine story on college fraternities.

MILTON CANIFF
New York, N.Y.

Sirs:
As two fraternity men we feel that LIFE portrayed the fraternity system fairly and honestly.

We thought that you might be interested in a communication we received before LIFE's essay appeared from our national, an organization of over 75 member chapters. This is how it ran:

"Dear Brothers:
"LIFE magazine for Feb. 6 will carry 11 pages of pictures on the college fraternity."

"We believe that the subject will be treated from the sensation-seeking standpoint and that the fraternities will be taken over the hurdles...."

"If the college fraternity is unfairly treated, then all fraternity men should show their disapproval by not buying the magazine.... Fraternity men should leave tons of unsold magazines on LIFE's hands and make it a costly experiment for the publisher."

"... If the article warrants it, we suggest that all of your members write individual letters to LIFE protesting the treatment. Intelligent, sensible letters should be written...."

Hardly had the issue appeared when we got another letter from national telling us to disregard the warning and urging us to write in our congratulations. Please withhold our names.

NAMES WITHHELD
Sirs:
A lusty swing of the white pine paddle on the hindmost for those who only look upon us as "citadels of snobbery" and breeders of "college playboys."

JOHN G. FLECK
Lehigh University
Philadelphia, Pa.

Sirs:
"Citadels of snobbery" is precisely what the sorority-fraternity system constitutes on those loosely managed school campuses where they breed and fester. Drunkenness, degenerate living, childish ritual, vandalism, caste-snobbery and idolatry are one phase of the typical American college.

I am an ex-Greek. I know these things from both sides of the fence.
CHARLES W. PLATT
Norman, Okla.

Sirs:
Thanks for showing fraternities as they are. Belief that they are organized snobs comes strictly under the heading of "sour grapes."

MRS. VERN SUTLIFF JR.
San Diego, Calif.

Sirs:
Thank God for racial, religious, social and economic discrimination in America! Without them the college

Only **DUFF'S**
White Cake Mix can
make a Prize cake
like this!



Um-m-mighty light White Cake—only 4½ minutes from box to oven!

★ **FLUFFIER**, more tender and velvety
... ★ **HIGHER** and lighter ...
★ **MOISTER KEEPING** ... ★ **PURER WHITE**, more sparkling and flavorful than time-taking home recipes!

Eggs, milk,
everything in.
Just add water
—that's all!



A Product of
AMERICAN HOME FOODS

NASTY COLD?



For nasal stuffiness, headache, feverishness, aching muscles and irregularity, get...

QUICK RELIEF

... with GROVE'S—the only nationally advertised cold tablets that bring you wonder-working Hyoscyamus, for relief of nasal stuffiness... so you...



BREATHE EASY

GROVE'S COLD TABLETS combine Hyoscyamus with seven other medicines (including a mild laxative) that ease other cold miseries, too!



Get GROVE'S COLD TABLETS

THE GROVE LABORATORIES, INC.
ST. LOUIS, MISSOURI

CONTINUED ON PAGE 6

8 IMPORTANT REASONS WHY NO OTHER PILLOW GIVES SUCH HEALTHFUL SLEEP!



See for yourself why the **PLAYTEX® SUPERFOAM®** PILLOW is the greatest advance in sleeping comfort in more than 1,000 years:



1. Snuggle it against your cheek! PLAYTEX Superfoam is never lumpy, saggy, bumpy, always softly smooth—completely different from old-fashioned feather pillows!



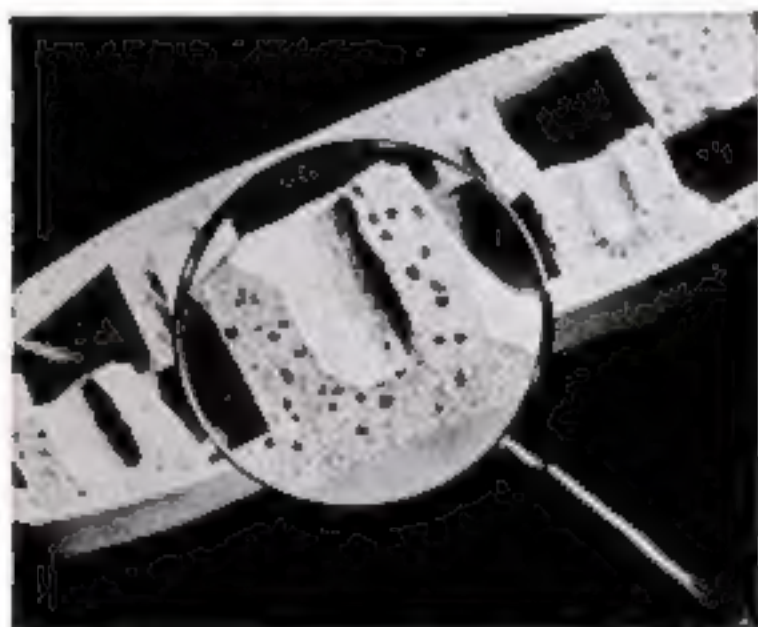
2. Press it between your palms! Amazingly resilient PLAYTEX Superfoam Pillow never loses shape, looks neat, freshly-plumped even after a long night's sleep!



3. Just like whipping egg white at high speed for fluffier meringue—the PLAYTEX process gives Superfoam its wonderful deep-sleep texture, gives you sleeping luxury!



4. Exclusive "staggered core" construction of PLAYTEX Superfoam contributes so much to refreshing, relaxing sleep, cradles your head in the most restful position!



5. Millions of air cells inside the PLAYTEX Superfoam Pillow actually "breathe," give the Pillow its delightful fresh feel, its soothing coolness while you sleep!



6. Twist it, bend it, crumple it—the PLAYTEX Superfoam Pillow won't lose its shape! Night after night, it looks freshly-plumped, as sleep-inviting as the day you unpacked it!



7. Lighter, more buoyant than you ever thought a pillow could be! The PLAYTEX Superfoam Pillow lulls even the lightest sleeper into deep, sound, undisturbed sleep!



8. Allergy sufferers! No feather dust or irritation makes you sneeze, cough or choke at night! PLAYTEX Superfoam Pillow is 100% allergy-free, dust-free, mildew-proof.



*For every occasion . . .
no gift compares with
the gift of sleep!*

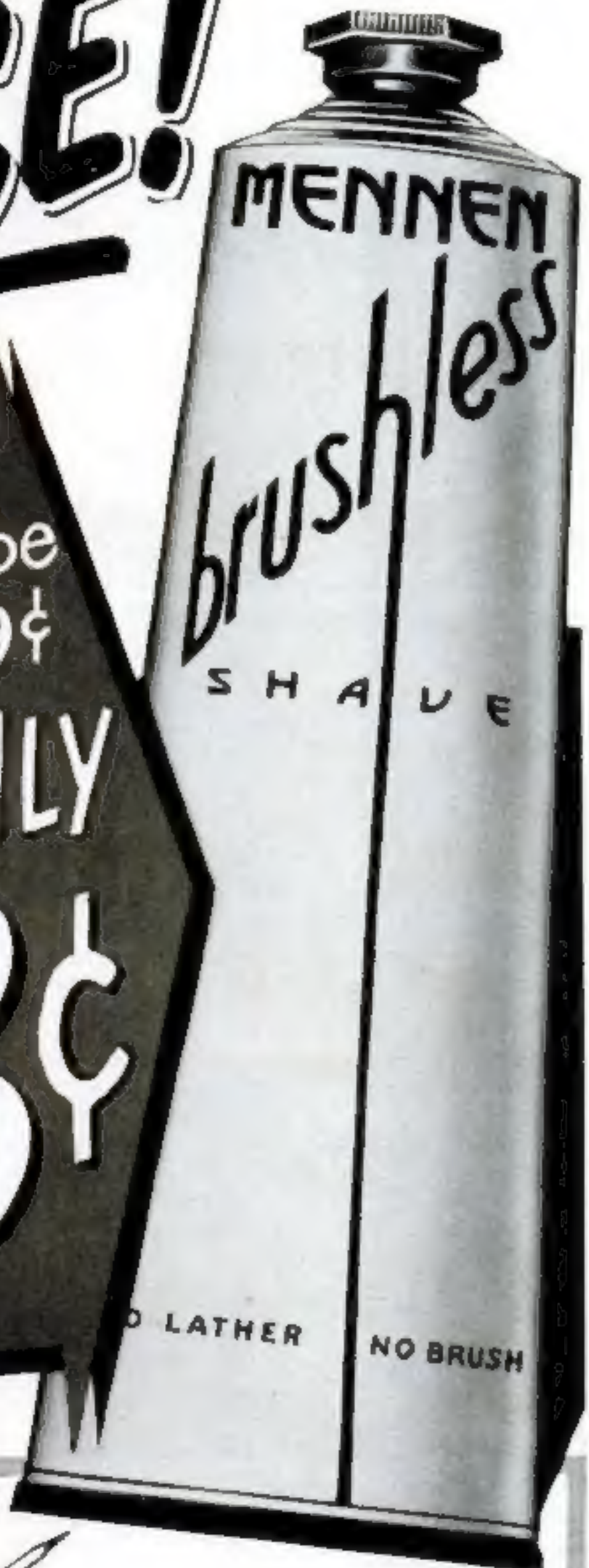
Beautifully gift-packaged. In department, furniture stores and sleep shops everywhere.

With white, pink or blue Sanforized cover **\$8.95**
Also, luxurious rayon satin covers, slightly higher.

INTERNATIONAL LATEX CORPORATION
Playtex Park ©1950 *TM Dover Del.

NEW LOW PRICE!

Get Giant Tube
Regularly 49¢
NOW ONLY
43¢



MORE DOCTORS

Who Specialize in Care of The Skin

USE MENNEN BRUSHLESS

Than All Other Brands Combined

HELPS MAKE BEARDS UP TO 47% SOFTER!

LETTERS TO THE EDITORS

CONTINUED

fraternity would cease functioning, and our colleges could no longer manufacture those superb products of non-individualism, juvenility and social complacency we term "frat men." ...

THOMAS BEIDELMAN

University of Illinois
Urbana, Ill.

Sirs:

Long may Sigma Chi flourish, if only to teach its members how to wash behind their ears and how to look blasé at a dance. We at Notre Dame believe such instruction should come earlier in life, but better late than never.

JACK KELLY

Notre Dame, Ind.

Sirs:

Your article on Sigma Chi initiations was one of the dirtiest tricks you ever pulled. Our "hell week" starts Saturday, and if our actives get any ideas, such as dropping raw eggs. ...

CHARLES DAUGHERTY JR.

Meadville, Pa.

Sirs:

This week is "hell week" for us pledges of Alpha Tau Omega at Adrian College. When we reported for our meeting last night the actives all had a gleam in their eyes. The article sure put some grueling ideas in their heads.

TOM REED, Pledge

Adrian, Mich.

LEFT-HANDED VIOLINIST

Sirs:

You show Wisconsin students listening to a left-handed violinist (p. 93). We have never heard of one.

MRS. ELLIS V. FANNING

East Bridgewater, Mass.



THE PRO ARTE QUARTET

● Rudolf Kolisch, first violinist of the Pro Arte Quartet (above), has been left-handed since an accident to his hands in childhood forced him to switch to left-handedness.—ED.

SNOWY OWLS

Sirs:

Snowy owls ("Ghostly Visitors from the North," LIFE, Feb. 6) may look beautiful to the man who does not see them very often, but in North Dakota where we see them every year they are not what they may seem to a guy who studies nature through a window. They destroy more game birds than the average hunter. I have seen them destroy whole coveys of partridges, many hen pheasants and any cottontail that ventures out of the brush. If we protect such birds, we should have protected Dillinger, Baby Face Nelson and their like.

One partridge or pheasant is worth more to the average farmer or hunter than all the white owls that have ever flown over American soil.

OTTO MICHALIK

Oakes, N. Dak.

● Snowy owls rarely prey on game birds. Their principal victims are ro-

CONTINUED ON PAGE 1

Fast help for HEADACHE

Upset Stomach • Jumpy Nerves



When headache hits, do as millions do. Take Bromo-Seltzer right away for fast help. Not only for the pain of headache but also for the upset stomach and jumpy nerves that often go with it.

Quick! Pleasant! Bromo-Seltzer effervesces with split-second action, ready to go to work at once. Caution: Use only as directed.

Proof of popularity: Today more people than ever use Bromo-Seltzer. You must be satisfied or your money back!



Get Bromo-Seltzer at your drug store, fountain or counter today. It's a product of the Emerson Drug Co. since 1887.



During maple-sugaring season in the 1850's the young folks loved to invade the sugar camp and enjoy "sugar-on-snow."

Feast on this real maple sugar flavor

Those folks back in 1850 loved their maple syrup. But they missed what we give you in Vermont Maid Syrup—uniform quality flavor, year after year.

Our skilled blenders first select rich, full-bodied maple sugar; then blend it with cane sugar. This gives you, at moderate cost, uniformly rich and delicious real maple sugar flavor.

At your grocer's.
Penick & Ford, Ltd., Inc.
Burlington, Vermont



Vermont Maid Syrup



No. 1 danger spot in the home . . . why?

MORE DEADLY FIRES start in the kitchen than in any other place in the home.

Most of these fires are caused by defective electrical appliances and wiring, by stoves, flammable cleaning fluids, and careless smoking.

But every year more is being done to make your kitchen safer. An example of this is the work of the Underwriters' Laboratories, widely-known testing organization sponsored by the National Board.

Here safety engineers are constantly testing electrical appliances...refrigerators, irons, toasters, electric stoves, radios, television sets, light switches, wiring and many other products submitted by manufacturers for rigid fire safety tests. The U.L. label is attached to those that pass. Look

for it when you buy electrical appliances . . . it means they are safe to use.

This is only one of many valuable services carried on in the public interest by the fire insurance business.

• Your fire insurance affords the *security* needed to protect mortgage money loaned to you on a home, store, factory or other property that might be destroyed by fire—thus creating a sound base for credit.

The fire insurance companies which maintain the **National Board of Fire Underwriters**

85 John Street, New York 7, N.Y.

for public service through . . . Fire Prevention in Home and Industry . . . Improved Fire-Fighting Facilities . . . Fire-Safe Building Codes . . . Safety Tests by Underwriters' Laboratories . . . Arson Investigation . . . Disaster Emergency Plan for Policyholders . . . Research and Engineering

To protect your life, your home, your job
STOP FIRE the Fifth Horseman



Put out every match and cigarette



Don't use gasoline or benzine for home cleaning



Use only wiring and appliances with the U.L. label



Repair and insulate heating plant, stoves, chimneys

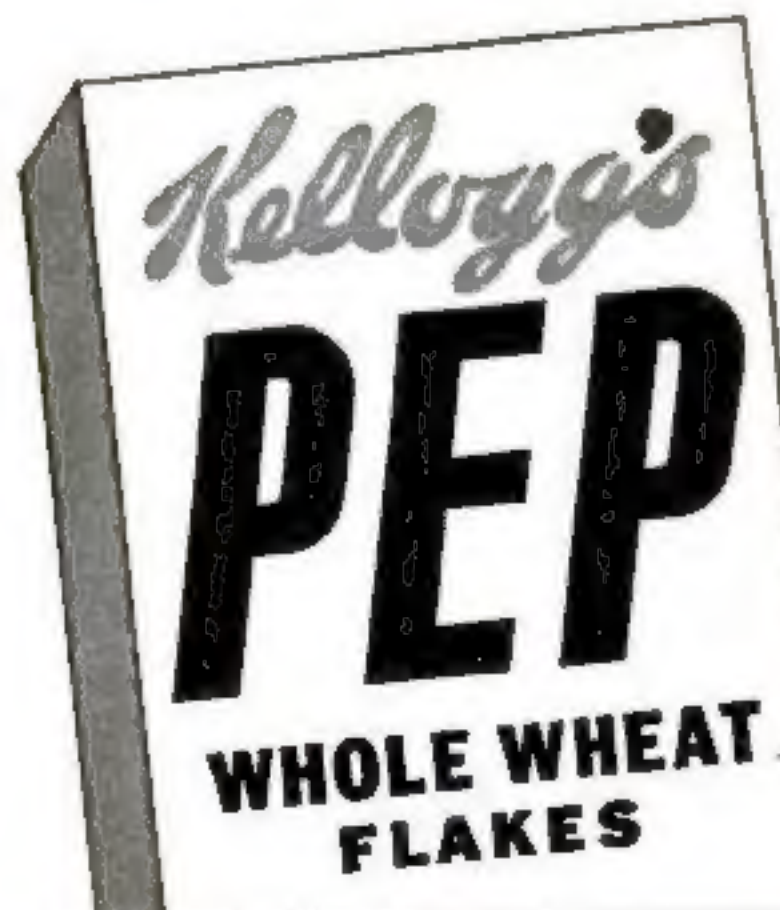
Mom feeds me



wallop-packin' PEP



the "BUILD UP" WHEAT CEREAL



You get all the goodness of fresh-toasted wheat, ready-to-eat in PEP. All the "sunshine" vitamin D you need for a full day. And a rich store of other vitamins and minerals found in the vital wheat germ. PLUS—all the sources of muscle-building, of growth and energy, of strong bones, good nerves and teeth, which come from fresh-toasted wheat. And more of the builder-upper vitamins than in any other wheat flakes cereal. Tomorrow make your breakfast "Main Dish" Kellogg's PEP. It's the "Build up" wheat cereal.

FRESH-TOASTED! FRESH-FLAVORED! FRESH-PACKED!

LETTERS TO THE EDITORS

—CONTINUED—

dents, who do more harm by robbing nests and killing chicks than snowy owls ever do.—ED.

LOCAL "SAUNA"

Sirs:

His Excellency Avra M. Warren, Envoy Extraordinary and Minister Plenipotentiary of the United States ("Picture of the Week," LIFE, Jan. 30), seems to have enjoyed his sauna



in spite of the torture you say he suffered. The same cannot be said, however, for our local plumber Ray Maki, who was recently photographed in his front yard manfully shivering in his snow tub.

BILL BATES

Kelso, Wash.

COVER

Sirs:

I want to congratulate you on the photograph of Eva Gabor on the cover of LIFE (Feb. 6).

She is the loveliest girl I have ever seen. And believe me! I have seen a lot of pretty girls.

RICHARD L. BITTING, U.S.M.C.
Camp Lejeune, N.C.

CONTINUED ON PAGE 11

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I enclose \$ _____

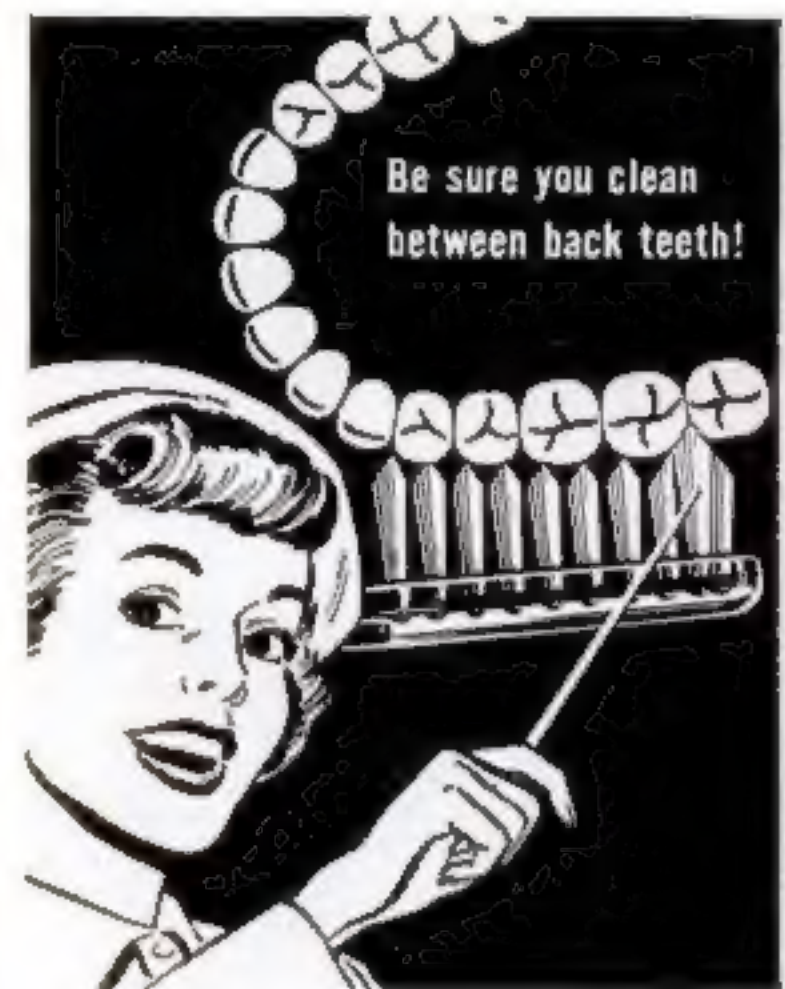
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STOP TOOTH DECAY AT ITS SOURCE!



Much trouble can be prevented by frequent use of this "PRO" Tooth Brush, with the scientific End-Tuft!

Get after the cause of tooth decay with the Pro-phy-lac-tic "PRO" Tooth Brush! The scientific End-Tuft makes it easy to clean between back teeth where food acids so often start trouble.

After every meal . . . brush then rinse! This method definitely reduces decay, as proved by dental authorities.

No dentifrice—no matter how good—can effectively reduce decay, except with frequent, thorough brushing! Today get a Pro-phy-lac-tic "PRO" Tooth Brush and start on the road to improved dental health.



50¢
PRO-PHY-LAC-TIC
"PRO" TOOTH BRUSHES


 BY APPOINTMENT
 PERFUMERS TO
 H. M. QUEEN MARY.
 YARDLEY, LONDON

*Every day...
 let the fragrance
 of Lavender be yours*



No other soap in all the world is
 like Yardley English Lavender Soap.
 Made according to a unique,
 traditional formula, it's generously
 and skillfully perfumed so that
 it never loses its fragrance. Because
 its creamy lather comes freely,
 you use less of it, and it lathers down
 to the last tiniest sliver. It's double-
 wrapped to treasure the fragrance.



Live in Lavender, and know the joy,
 the lighthearted assurance, this
 delicate fragrance brings
 throughout the day. Begin with
 Lavender Soap, so richly scented
 that its fragrance never fades,
 and with its quick, creamy
 lather that gives your complexion
 beneficent care. Add a fragrant,
 smoothing film of Lavender
 Dusting Powder. Then, and most
 important, use Yardley English
 Lavender to spread delight. Use it
 generously, make it a part of you.

YARDLEY

*English
 Lavender*

Yardley English Lavender,
 from \$1.75, plus tax

Dusting Powder, \$1.50, plus tax

Yardley English Lavender Soap, \$1.35
 (box of three)

Bath size, 75c a tablet

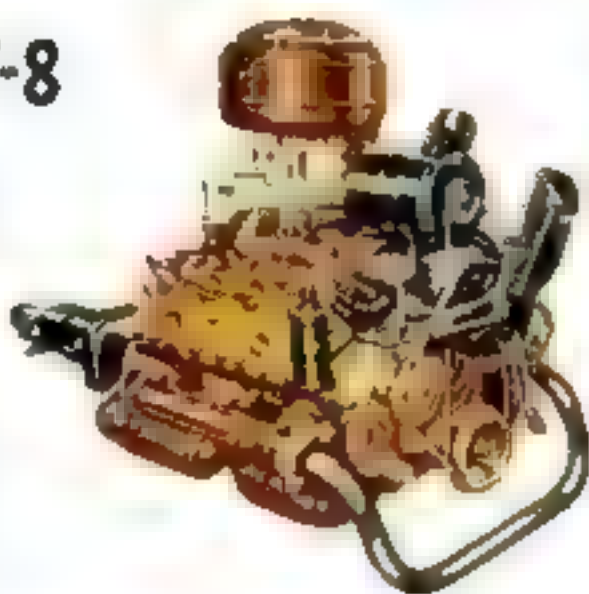
QUIET IS THE WORD FOR QUALITY



The new Ford Custom Deluxe Club Coupe. White sidewall tires optional at extra cost.

QUIET NEW V-8

It's a full 100 horsepower yet it never raises its voice! New, laminated timing gears are next to silent! New "quiet contoured" camshaft lobes "hush" valve action! New super-fitted pistons are designed to start quietly and run quietly! New, slow-speed fan cools quietly as a breeze! Here's the one and only V-8 engine in the entire low-price field. It's the same type used in America's finest cars. And matching this great V-8 in quality, Ford also offers the new and brilliant 95 horsepower Six.



**'50
FORD**

"Fashion Car" Style. Inside and out, the new Ford is more beautiful than ever before. What's more, Fords keep their "showroom complexion"—the finish is baked-on! And for driving comfort through the years, the '50 Ford has new non-sag, front seat construction. But take the wheel—try the "feel" of the one fine car in the low-price field—the '50 Ford!

NEW HUSHED RIDE

It's a "Mid Ship" Ride, away from the wheels, and it's so quiet you can hear yourself think! That's because the doors, roof and body panels of the heavy-gauge "Lieguard" Body are "sound-conditioned" against road noise. You'll love the way Ford's "Hydra-Coil" and "Para-Flex" Springs soak up bumps before they get to you!



There's a *Ford* in your future...

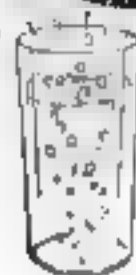
with a future built in

RELIEF

from discomfort of

**ACID
INDIGESTION
CONSTIPATION
SICK HEADACHE
DULLNESS**

due to ordinary sluggishness



Whenever you're headachy, upset, sour because of acid indigestion—take sparkling Eno quick! You'll promptly help neutralize excess stomach acid, ease "full feeling" overnight! When you wake, take

Eno as a quick-acting laxative. It offers positive, yet gentle relief. Used by millions. At all druggists—buy today!

- 1 ANTACID—relieves sourness, gas and heartburn promptly.
- 2 LAXATIVE—to relieve temporary sluggishness quickly, take before breakfast when needed.
- 3 PLEASANT—as a glass of sparkling, bubbly soda water!



Take Good-tasting **ENO**

Don't wear dirty glasses

BUY SIGHT SAVERS

THE Silicone Treated Tissues THAT KEEP YOUR EYEGLASSES Clean! YOU WILL SEE BETTER AND LOOK BETTER, TOO!

Handy to Carry and Easy to Use

Only 10¢

FOR FULL MONTH'S SUPPLY

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Dew Corning Corporation, Midland, Mich.

LETTERS TO THE EDITORS

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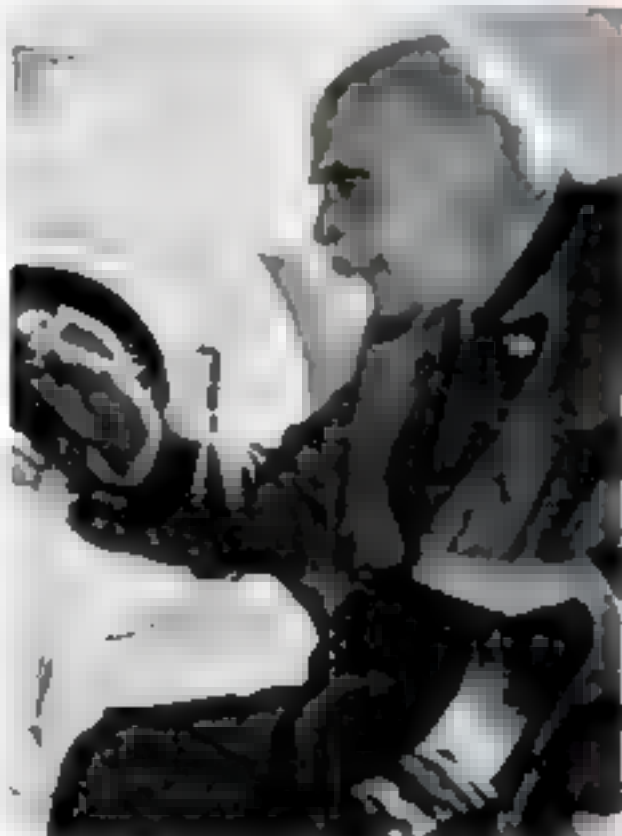
CLEAN COUP

Sirs:

The old man in the Viennese self-service laundry ("U.S. Scores Clean Coup," LIFE, Feb. 6) is Ferdinand von Eminger, a living reminder of Austria's proud past. Once an officer in the Imperial Guard, he is a well-loved figure in Vienna today. Because he so strikingly resembles the late Emperor Franz Josef, he is accorded the same courtesy from the Viennese that the old emperor himself would have received. The first time he came to call on me at my hotel, the concierge told me, "He is one of the few remaining—he is like a breath of old Austria."

GENE MACWILLIAMS

Maplewood, N.J.



FERDINAND VON EMINGER

CIRCLE SKIRTS

Sirs,

You say that circle skirts ("Circle Skirts," LIFE, Feb. 6) become immediate conversation pieces.

The only conversation my circle skirt has ever stirred up was when a neighbor, while eyeing my washing, asked why in the world I had a hole in the center of that round tablecloth.

AUDREY B. EDWARDS

Winter Haven, Fla.

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NEW IMPROVED

"Eveready" Hearing-Aid "A" Battery!

The famous No. 1005E—NOW better than ever!
Even better performance! Even longer life!

PRE-TESTED

"25% longer life!" "Wonderful tone reception!" "Fewer battery changes!" Those are just a few of the reports that have been coming in from enthusiastic men and women who have actually used—pre-tested—this new battery in their own hearing-aids! So try this new battery yourself! There's no increase in price—but what a difference in performance! Don't miss out on this better hearing another day!

"FEWER BATTERY CHANGES! PURE, CLEAR TONE!" says Lester Balagur who uses his hearing aid 2 to 4 hours daily. "It just didn't seem possible until I tried this new and improved 'Eveready' 'A' battery No. 1005E! The way it cuts down background noises, makes reception crystal clear! This new battery lasts...and lasts...and lasts, even though I use my hearing aid off and on for a total of 2 to 4 hours a day! That means fewer battery changes and economy for me!"



"GIVES 25% LONGER USE! THE SAME CLEAR RECEPTION!" says Everett Smith who uses his hearing aid 12 to 16 hours a day. "I've used the 'Eveready' 'A' battery No. 1005E for the past year. I got as much as 102 hours of use from one battery! Thought that couldn't be beat for long life and tone quality. But this new, improved 1005E gives me all that and more—25% longer use! I know! I've checked it. And for the same price, too—that means a big saving!"

SEE THE NEW AND IMPROVED
"EVEREADY" "A" BATTERY No. 1005E
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30 East 42nd St., New York 17, N.Y.





MISS CELLMATE OF THE WARDENS ASSOCIATION

Eva Dahlbeck, "star of the new Swedish film *Caged Woman*," says the caption for this picture "has been selected by the Wardens Association of North America as the kind of

cellmate they would choose." Although the film is a real one (Davis, who also distributes foreign films, owns it), the Wardens Association of North America is entirely fictitious.



MISS WATER CONSERVATION

For New York's water crisis, Davis had "Citizens Committee for Emergency" give Katie Autry title.

SPEAKING OF PICTURES . . .

... A press agent's fakes get printed



PUBLICIST DAVIS

Press agents know that most editors like to please their public by printing pictures of pretty girls and send out a steady stream of such photos. Generally they try to show that their queens, princesses and plain misses have some vaguely legitimate reason for being what they are. But a New York agent named Arthur Davis has found that such efforts are all waste motion. When he wants the papers to use a picture of a girl from the model agency he represents, he simply thinks up a title for the girl and a high-sounding name for a phony organization that supposedly sponsors her. Impressed by names like "Wardens Association of

North America," the papers fall in with Davis' game. Once, to test his luck, Davis sent them a picture of a man who he said was "selected by the Institute of Executive Secretaries" as "the boss they'd most like to stay in with after office hours." Some papers ran it. It was a picture (inset above) of Davis himself.



MISS CANASTA

Betty Price (left) was chosen "Queen of Canasta" by "Playing Card Dealers of America." To "Panda Manufacturers" Joan Otti (right) was "girl they'd most like to 'pet.'"



MISS PANDA



MISS PERFECT PROFILE

Cocoa Brown got this honor from "Plastic Surgeons Institute." Caption says she was also named "Miss Outdoor Girl" by the "Society of Western Real Estate Salesmen."



MISS SECRET MISSION

Peggy Purdy got this name, says Davis, from "a group of Canadian Northwest Mounties." Davis has also planted pictures of ambitious society matrons, eager businessmen.



Many men today are actually paying the Florsheim price, without enjoying Florsheim quality. Since price is not a factor, why not choose the finer fit, the longer wear that have made Florsheim Shoes America's standard of value for almost 60 years. You're paying the Florsheim price; why not wear them?

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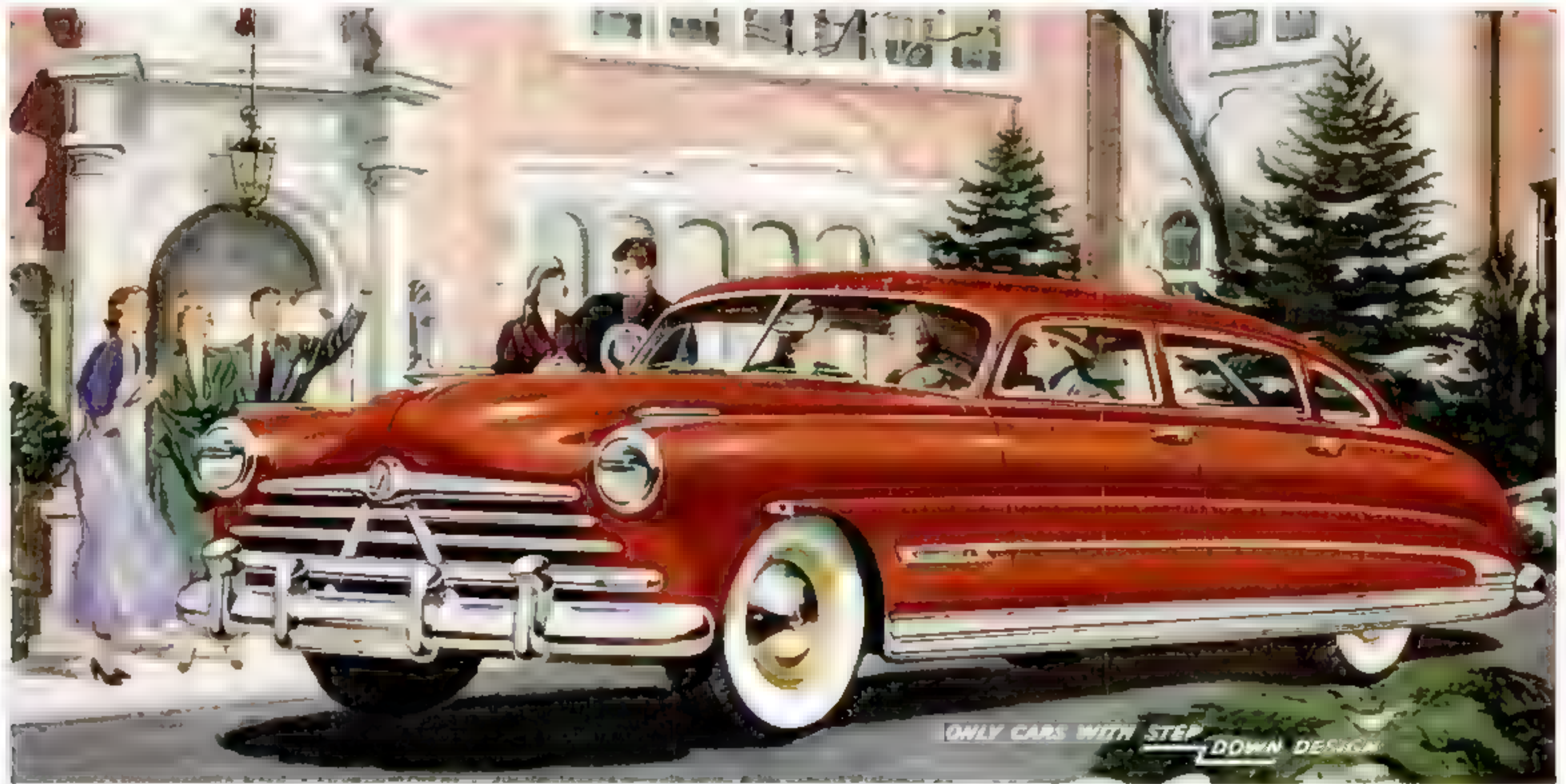


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Announcing **NEW 1950 HUDSONS**

WITH "THE NEW STEP-DOWN RIDE"



Illustrated above—Custom Commodore Series 4-Door Sedan

Here are 1950's most beautiful automobiles • The only cars with "step-down" design, which provides America's lowest center of gravity, and the steadiest road-hugging ride ever known • Along with more room than in any other car • Here's the added safety of Hudson's exclusive Monobilt body-and-frame* • The high-compression performance of America's most powerful Six • Or an even more powerful Eight • And all-range Super-matic Drive† • Here, in short, are unique features that enable Hudson alone to bring you "The New Step-Down Ride"!

† Optional at extra cost

* Trade-mark and patents pending

They're ready for you now!

Beautiful, streamlined New Hudsons for 1950 that afford you an exciting motoring experience—"The New Step-Down Ride"!

This is the delightfully different kind of ride that cradles you in the lowest-built car of them all!

You instantly see that these New Hudsons have the lowest center of gravity in any American automobile—and as a result, you know instinctively as you view them, that they hug the road more tenaciously and are therefore America's best-riding, safest cars!

You quickly see, too, that these low-built Hudsons for 1950 have full road clearance, and more head room than in any mass-produced car built today—thanks to "step-down" design with its recessed floor!

And amazing head room is only one kind of spaciousness you'll find in these great cars!

Through "step-down" design and ingenious use of space that is wasted in other makes, these new, streamlined Hudsons of normal exterior width bring you seat cushions that are up to 12 inches wider than those in cars of greater outside dimensions!

In fact, when you try "The New Step-Down Ride", you'll find the New Hudson has more room than any other car, at any price!

And, you'll enjoy the high-compression, get-up-and-go performance of your choice of two of the greatest engines in a long line of great Hudson engines—the Super-Six, America's most powerful Six, or the even more powerful Super-Eight!

But all of this only highlights "The New Step-Down Ride"—an experience so delightfully different you have to try it yourself to fully appreciate it! Your Hudson dealer invites you to try these great new cars soon. Hudson Motor Car Company, Detroit 14.



AVAILABLE WITH NEW **SUPER-MATIC DRIVE†**

Hudson brings you no-shift driving with Super-matic Drive, which includes the fuel economy of overdrive—the only transmission that shifts gears for you just as you want, doesn't creep when starting or after stops, doesn't slip as you roll along, and can be converted to manual operation at the touch of a button.

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ONLY HUDSON, THE CAR WITH "THE NEW STEP-DOWN RIDE", BRINGS YOU THESE ADDITIONAL FEATURES . . . Chrome-alloy motor blocks which minimize wear and reduce upkeep costs . . . Triple-Safe Brakes—finest hydraulic system with reserve mechanical system on same pedal, plus finger-tip-release parking brake . . . Fluid-Cushioned Clutch . . . Wide-Arc vision with Curved Full-View windshield and rear window . . . Weather-Control†—Hudson's heater-conditioned-air system . . . Super-Cushion tires . . . Safety-Type wide rims . . . Center-Point Steering and more than 20 other high-performance, long-life features that help make "step-down" designed Hudsons leaders in resale value, coast to coast, as is shown by Official Used Car Guide Books!

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NOW—3 GREAT SERIES

Custom Commodore, Famous Super, Lower-Priced Pacemaker



"What's wrong with marriage as a career?"

Asked *ELSIE, the Borden Cow*

"Haw! Haw!" guffawed Elmer, the bull. "A career is a guy's *life work*!"

"But marriage and homemaking are a woman's *life work*," reminded Elsie, the Borden Cow.

"Sure," poo-pooed Elmer, "but what do you do that's *worth while* in a home?"

"Don't you think delicious dishes like my *Glory Casserole* made with leftover vegetables and Borden's Evaporated Milk are worth while?" countered Elsie.

"Lay off the Borden's!" snapped Elmer. "We're talking about *careers*."

"Many a successful career man—and woman," observed Elsie, "began life on Borden's Evaporated. There's no finer, safer milk in any can!"

"Keep this up," frowned Elmer, "and my career will demand my attention *down town*!"

"If you're going," said Elsie, "on your way back, please bring some of that new ice cream that's so special—*Lady Borden Burgundy Cherry*."

"Hey!" brightened Elmer. "I really go for those big, juicy dark Burgundy cherries in Lady Borden Ice Cream. I could eat *that* ice cream from morning till night."

"If you did," laughed Elsie, "you'd have to give up your life's work. And you'd have to pass up all the other fine foods Borden's makes. And that would be a great pity. For each and every Borden's food is so good—if it's Borden's, it's *GOT* to be good!"

Fun with Food

By *ELSIE,*
the Borden Cow



"Got any cookies, Mom?"

That's an easy one to answer if you follow my magic 6-way cookie recipe...

Mix 1½ cups of *Eagle Brand Sweetened Condensed Milk* and ½ cup of peanut butter. Add any one of these: 2 cups raisins, 2 cups corn flakes, 3 cups shredded coconut, 2 cups bran flakes, 1 cup



chopped nuts, 2 cups well-chopped dates. Drop by teaspoonfuls onto greased baking sheet. Bake in moderate oven (375°F.) for 12 minutes, or until brown. Remove from pan at once. Makes 30 cookies—2½" diameter.

For other *Eagle Brand Magic Recipes* write me, Elsie, LI-20, P.O. Box 175, New York 46, N. Y. I'll be happy to oblige.

Listen to this! If you want to remove the odor of onion from your chopping knife and your hands, simply rub both with a slice of fresh tomato (canned won't do!). The odor disappears like magic!



Jiffy Snacks and canapés that taste out-of-this-world can be made so easily with Borden's Pippin Roll—that *sharp* natural American cheese in the handy 3-ounce roll!

Pippin Roll spreads easily—it shapes into attractive forms for salads and desserts.

You'll find Pippin Roll at the dairy counter of your favorite food store.

Just in case of a slip—here's an easy way to remove ice cream stains. If the material isn't washable, sponge the spot with dry-cleaning fluid, let dry and then sponge lightly with cold water. The spot'll come out sure!

IF IT'S
BORDEN'S
IT'S GOT TO BE GOOD

© The Borden Company

Try Elsie's *Glory Casserole* made with Borden's Evaporated Milk



- 2 ½ cups leftover vegetables
- 2 cups of well-seasoned medium cream sauce made *super smooth* with Borden's Evaporated
- ¾ cup buttered bread squares

Mix vegetables. Put them in greased casserole. Cover with cream sauce that's extra nourishing because it's made with Borden's Evaporated Milk. Sprinkle with bread squares. Bake in very hot oven (400° F.) until vegetables are heated through and bread squares are brown and crunchy. Serves 4 deliciously.



EXCITING NEW FLAVOR

Burgundy Cherry



Lady Borden Ice Cream

Lady Borden Ice Cream comes in a variety of exciting new flavors. Try the new Borden's Burgundy Cherry Ice Cream. It's so good, it's *GOT* to be good!



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LIFE'S COVER

The mountainous burst on the cover suggests the terrible consequences of an atomic war at sea. It was photographed from an Air Force plane flying over Bikini Lagoon on Baker Day (July 25, 1946)—the day of the first underwater atomic blast. This picture was taken about one second after the explosion, when a mile-wide cloud was spreading over the target ships below. The pale ring on the water was formed by the bomb's outrushing shock wave. How such a tremendous release of destructive power became possible is explained on pages 90 through 100.

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oh-oh, Dry Scalp!



"HE MAY THINK he's going places—but he won't get anywhere with his Dry Scalp! Golly, his hair is so dry it goes every which way! And look at that loose dandruff on his coat. He needs some down-to-earth advice about 'Vaseline' Hair Tonic, and I'll see that he gets it!"

*Hair looks better...
scalp feels better...
when you check Dry Scalp*



IT'S A CINCH! Check Dry Scalp easily and effectively with just a few drops daily of 'Vaseline' Hair Tonic. It supplements natural scalp oils...relieves dryness...loose dandruff...makes your hair look *naturally* better. Gives double care to scalp and hair. Contains no alcohol or other drying ingredients...It's economical, too.

Vaseline HAIR TONIC

TRADE MARK ®

TOPS IN ENTERTAINMENT: DR. CHRISTIAN, STARRING JEAN HERSHOLT, ON CBS EVERY WEDNESDAY NIGHT. SEE YOUR NEWSPAPER FOR LOCAL BROADCAST TIME.

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You should know about **THESE PEOPLE!**

Meet six owners of America's Steel companies. They bought steel stocks and therefore are investors. Surprised to see they are typical Americans? Don't be . . . for the steel industry's half million stockholders are all people like these. Average ownership is less than 75 shares each and many own fewer than 10 shares.



NORMAN F. MEULLEN, Aerodynamicist of Buffalo, N. Y. declares . . . "I own stock in a steel company and to me this means an investment in America. America's strength is in private industry and industry's strength lies with its investors".



HELEN M. F. PRICE, housewife and farmer, Sellersville, Pa. writes . . . "My steel stocks mean security of income since my husband's death. The savings of our young working years are supporting me in my declining years".



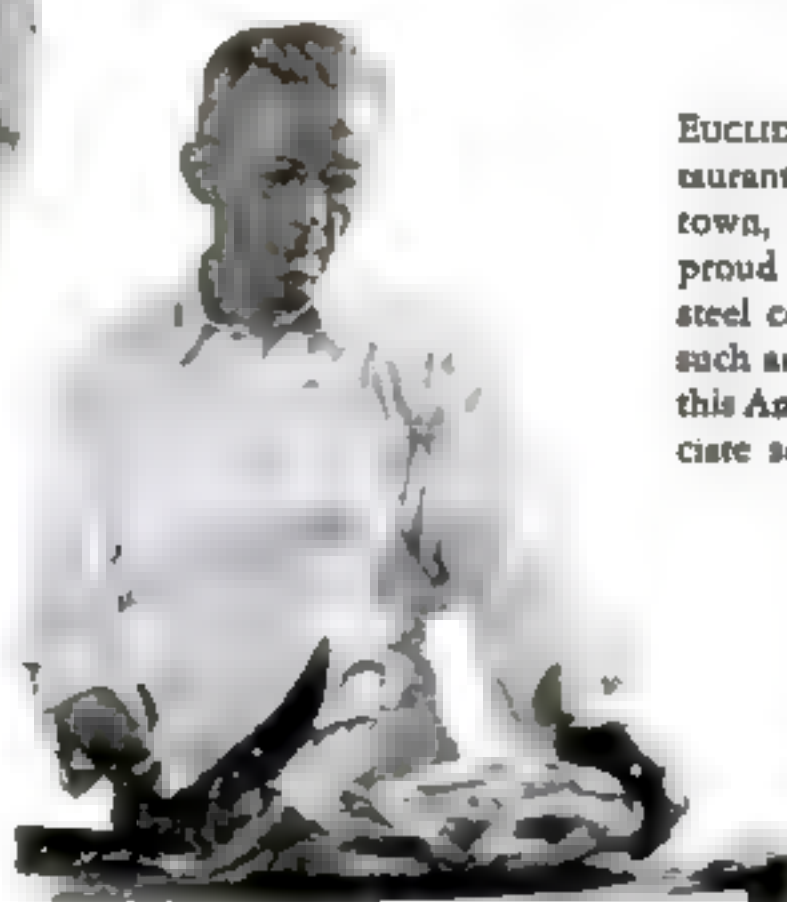
MRS. A. H. SHANNON, homemaker of Newton Centre, Mass. states . . . "owning stock in steel companies means that my investment and the income received is of vital importance to me".

The stockholders who own the shares of the 247 different steel companies in this country helped to create this industry. Today America's steel plants have 53% of the world's steel producing capacity. • Steel stockholders' returns have been

steady but not large in the past few years. Much of steel's earnings have gone into expansion in the form of new plants, machines and equipment. The steel industry is keeping pace with and ahead of the country's growth and demands. This benefits all Americans.



MARGARET ANN STEVENS, Middletown, Ohio housewife says . . . "I am interested in the conveniences of modern steel household equipment as well as the security afforded in steel stocks".



EUCLID M. KATSULOS, restaurant owner in Middletown, Ohio says . . . "I'm proud to own shares in a steel company which plays such an important factor in this America, which I appreciate so very, very much".



WILLIAM A. ADER, New York City merchant believes . . . "I own steel company stock and to me this means my savings have the same protection as if they were invested in any other business".

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WAR CAN COME; WILL WE BE READY?

LOUIS JOHNSON TALKS AND CARRIES A BIG AX, BUT HIS WORDS ARE STRONGER THAN HIS WEAPONS

Louis Johnson, U.S. Secretary of Defense, was saying it every way he knew how. He had put it profanely: we were prepared "to lick hell out of Joe Stalin." He had said it casually: yes, this country was "in grand shape" militarily. Last week, saying it more formally, he told the Federal Bar Association that our defenses "as of today are, in the opinion of the Joint Chiefs of Staff, myself and the President, sufficient unto the needs of the hour."

As it happened, the hour (the noon hour of St. Valentine's Day, in the fifth year of the atomic age) was somewhat later than he thought. For in Moscow that day Soviet Russia and Communist China were signing a mutual-aid treaty which grimly proclaimed itself sufficient unto the needs of the next 30 years. Presently the ceremony was attested by wirephotos (below) which were disturbingly reminiscent of treaty-signing pictures that had come out of Moscow and Berlin some years before. The signatories, now as then, included some men of smug and impassive mien who had been rather aptly described a fortnight earlier by one of Secretary Johnson's subordinates, Air Secretary Stuart Symington, as "those who reiterate America must be destroyed." These men now possessed, he said, "the world's largest army, largest air force and largest submarine fleet, and if they chose to mount a surprise atomic attack against any part of the United States . . . we have no sure defense against such an attack."

The country could only wonder how we could be in such grand shape if we were not only outnumbered but subject to atomic ambush as well. It would be pleasant to believe Secretary Johnson and unpleasant to believe Secretary Symington, but impossible to believe both.

Which one was right? Louis Johnson had claimed that by "whittling away" at "waste and fat," and by holding the military establishment to an arbitrarily imposed \$13.5 billion budget, he was actually strengthening our armed force. Yet a good many men among his own top brass, who were keeping their mouths shut, felt that minimum security demanded that we spend \$4 billion more a year. (Nobody was talking yet about *maximum* security, simply because it might run to \$100 billion a year.) If they were right, then their boss and his boss,



JOHNSON & BOSS spoke soothingly of our preparedness when Joint Chiefs returned from Asiatic errand.

President Truman, were guilty of stubborn wishful thinking about our safety.

Last week Joseph and Stewart Alsop, in two columns which they titled "Mr. Johnson's Lies" and which their editors softened to "Mr. Johnson's Untruths," nailed Mr. Johnson to the mast. They granted he had sliced away waste and fat but accused him of severing arteries and tendons. He was, they said, "practicing what amounts to a confidence trick upon the nation."

If so, and if Russia was building an offensive war machine while we were not, the nation did not seem to be greatly upset about it—yet. LIFE correspondents, keeping their ears open all over the country, heard little last week to indicate that national defense or the coming of the hydrogen bomb or the passing of the U.S. copyright on the atomic bomb or even war and peace were on every tongue. People wanted to talk about anything else but.

Very soon, however, events will dictate some important national decisions. Then our national leaders will have to know whether the people are behind them or ahead of them. The decisions will affect our foreign policy and all its elements, especially the element of military power. We must decide where and how to build the situation which, as Secretary Acheson says, "will extend the area of possible agreement; that is, to create strength instead of the weakness which exists in many quarters."

What kind of strength does this mean? It means the only kind that the Soviets respect—the kind

that will give Mr. Acheson a diplomatic hole card of real power and will enable him to deal calmly and firmly with either phony peace offensives or military threats.

We must also decide what it is worth to be strong. Taking Army Secretary Gordon Gray's word for it, that World War II will cost one trillion, 400 million dollars, we must decide what we are willing to pay in money, effort and ingenuity to try to keep World War III—the one we are now in—from becoming a shooting war. The price of not preventing war was made more frightening by a Navy scientist's guess that we might suffer 15 million casualties on the first day of war and by military estimates that our big problem would be how to survive the first 18 months, while our potential power was mobilized to counter the enemy's stock-piled power and eventually take the offensive in the traditional American way of waging war. Some of the decisions must be made right away. This year of 1950 may be the last in which the U.S. will be able to make its choices of its own free will instead of having them made for us by the Soviets.

It is with full knowledge that the issues are unpleasant to face, and too dangerous to ignore, that LIFE this week, with an atomic explosion on its cover, examines the dangers that beset us and our readiness to meet them. Here we appraise the military balance of power and the danger of a shooting war, so far as these can be measured without breaches of security. These are some of the questions we shall try to answer:

How might we be attacked? (pp. 20, 21)

How can we avoid surprise? (pp. 22, 23)

How badly off are our Army, Navy and Air Force? (pp. 24-29)

How are we making A-bombs? (pp. 90-100)

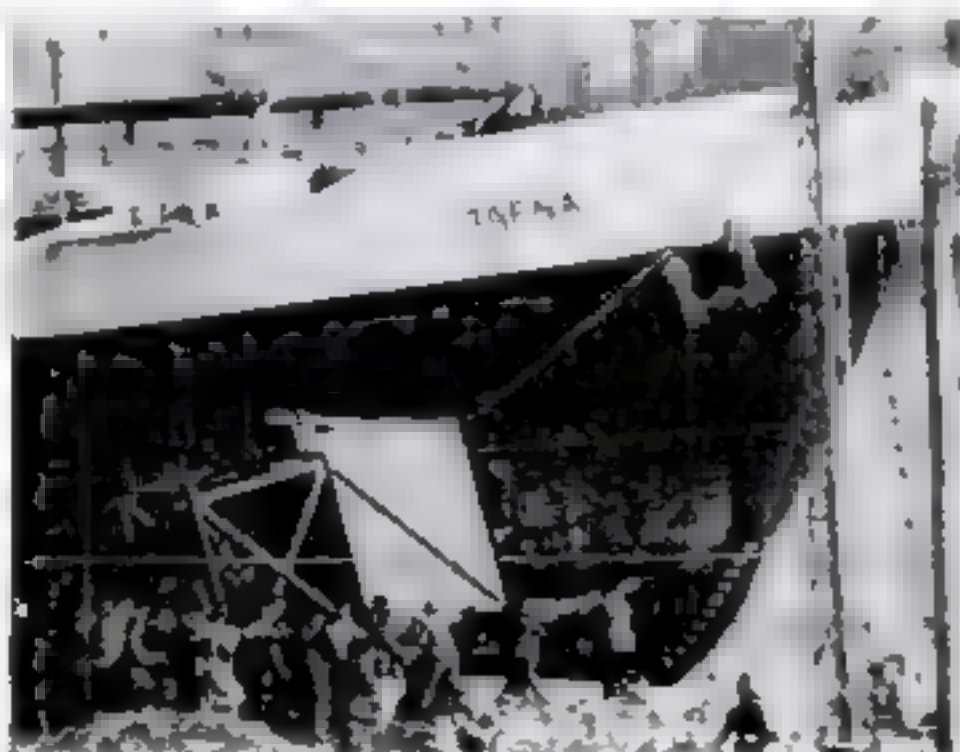
How completely would A-bombs wreck a U.S. city? (pp. 81-89)

How do people feel about the dangers we face? (pp. 37-40)

How does LIFE feel about them? (p. 30)



MOSCOW TREATY is signed by Vishinsky while Molotov (left), Stalin and Mao bind nations in Red tie.



FRENCH RIOT by Reds at Nice dumps shipment in protest against sending arms to French in Indo-China.



BERLIN RALLY by 5,000 Reds, barred from French sector meeting, is part of drive to get the Allies out.

RED MILITARY ADVANTAGE GROWS

Since secrecy hides most military statistics, this chart is based largely on well-qualified estimates. Included are main comparable elements of military forces of both powers. The U.S. Navy's moth-ball fleet is not indicated. Nor are the Navy's 5,500 combat planes or 3,000 trainers, which are essentially part of the carrier force and thus help create our superior surface fleet, shown at bottom of chart.

U.S.S.R.

U.S.

NATIONAL INCOME



\$65,000,000,000



\$222,000,000,000

MILITARY'S SHARE OF INCOME



25%



1%

AIR FORCE

COMBAT PLANES



9,000



3,300

TRANSPORT AND OTHERS



8,000



5,600

ANNUAL PRODUCTION OF PLANES



7,000



1,200

ARMY

MEN



2,600,000



640,000

INFANTRY AND AIRBORNE DIVISIONS



125



9

ARMORED DIVISIONS



110



1

NAVY

SUBMARINES



270



74

SURFACE VESSELS



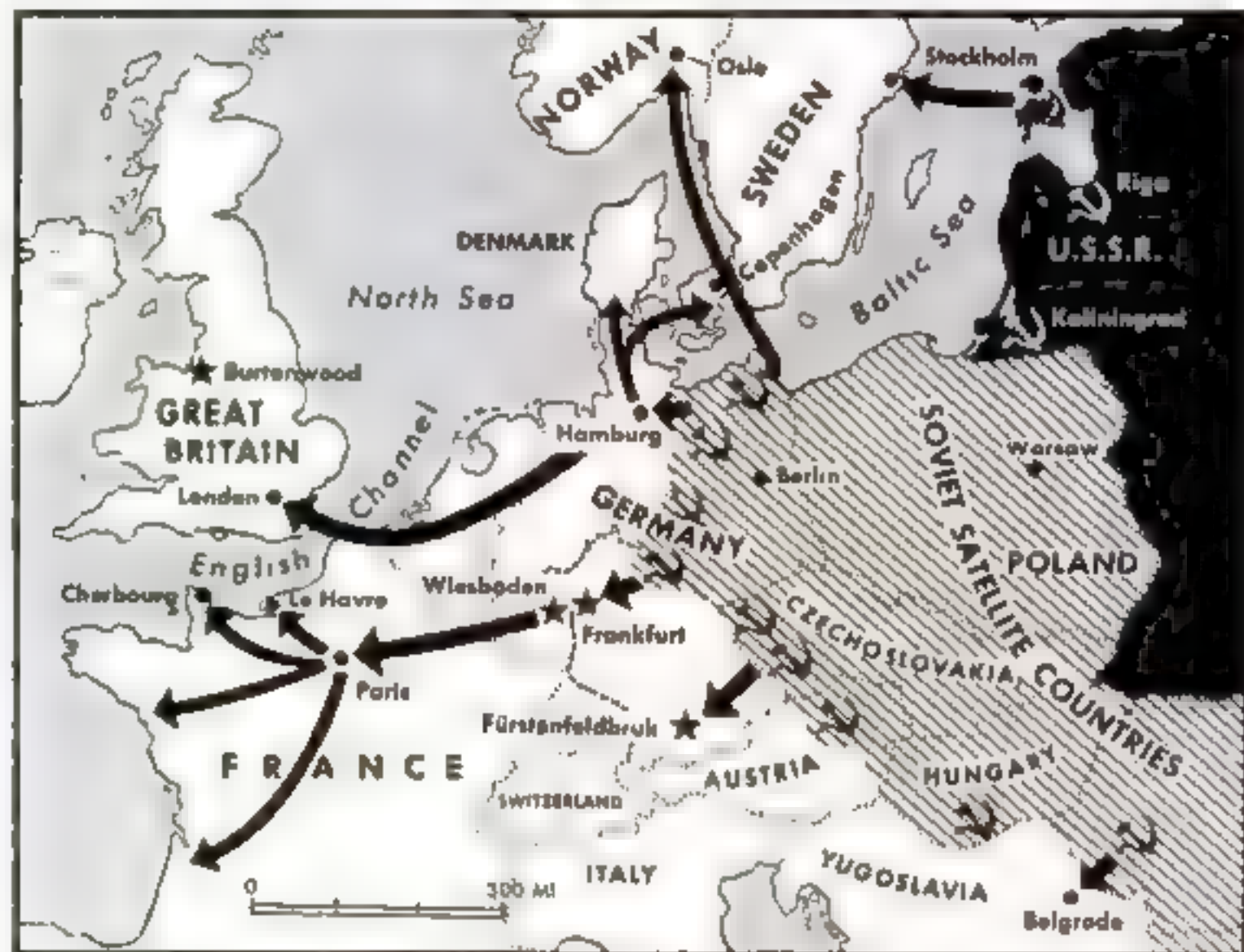
127



164



EASTWARD ATTACK could aim at quick destruction of U.S. bases in Alaska, to be followed by invasion from Siberia, an area the Red army has been stock-piling for years. Neutralizing Alaska would facilitate bombing of the U.S. from eastern Siberian bases.



WESTWARD ATTACK could hurl Red armies across Europe along most or all routes shown by arrows on the map above. By taking Norway and France, the Soviets would gain vital air and submarine bases as well as jump-off points for an invasion of England.



SOUTHWARD ATTACK could move probably from Bulgaria across Bosphorus, with other drives out of south Russia. By winning the Suez and Middle East, the Reds would sever the West's global life line and deprive U.S. and allies of a vital oil supply.



SOVIET BOMBERS COULD REACH U.S. along routes shown on this map, which looks down on Eurasian land mass and across North Pole toward Canada and U.S. The Atlantic and Midwest are within range of Murmansk-based bombers, which would need

aerial refueling to get back home. Targets on Pacific coast and as far east as Chicago could be reached from eastern Siberia. Russia's growing two-ocean submarine fleet could harass ship lanes (dotted lines) and might hit U.S. coastal cities with guided missiles.

HOW COULD SOVIET ATTACK COME?

THE REDS, WHOSE WAR PRODUCTION FAR OUTSTRIPS OURS, MIGHT BASE STRATEGY ON A QUICK KNOCKOUT

The danger of war is seen best in one compelling fact: the Soviets are preparing for war (chart, left). They are spending tremendous manpower and a quarter of their income to build up a huge military machine. Their satellite armies, including China's, more than double Soviet numerical strength. Their civilian support outside Russia already exceeds Hitler's fifth column. It is led by Communists like Thorez of France and Togliatti of Italy, who openly seek high political office while their party is a potential aid to Soviet military moves.

The chart at left on the opposite page shows how vastly Russian military strength exceeds American, both in "forces in being" and production of weapons. The U.S. Air Force is supplied with 1,200 new planes a year. Russia, with its growing industrial proletariat, is building 7,000 airplanes a year. They include many conventional fighters of the type they used in World War II for ground support but also many modern jets and long-range bombers of the B-29 type—and possibly better. Russia, never a naval power after Japan's navy sank the czar's fleet at Tsushima in 1905, now has a more power-

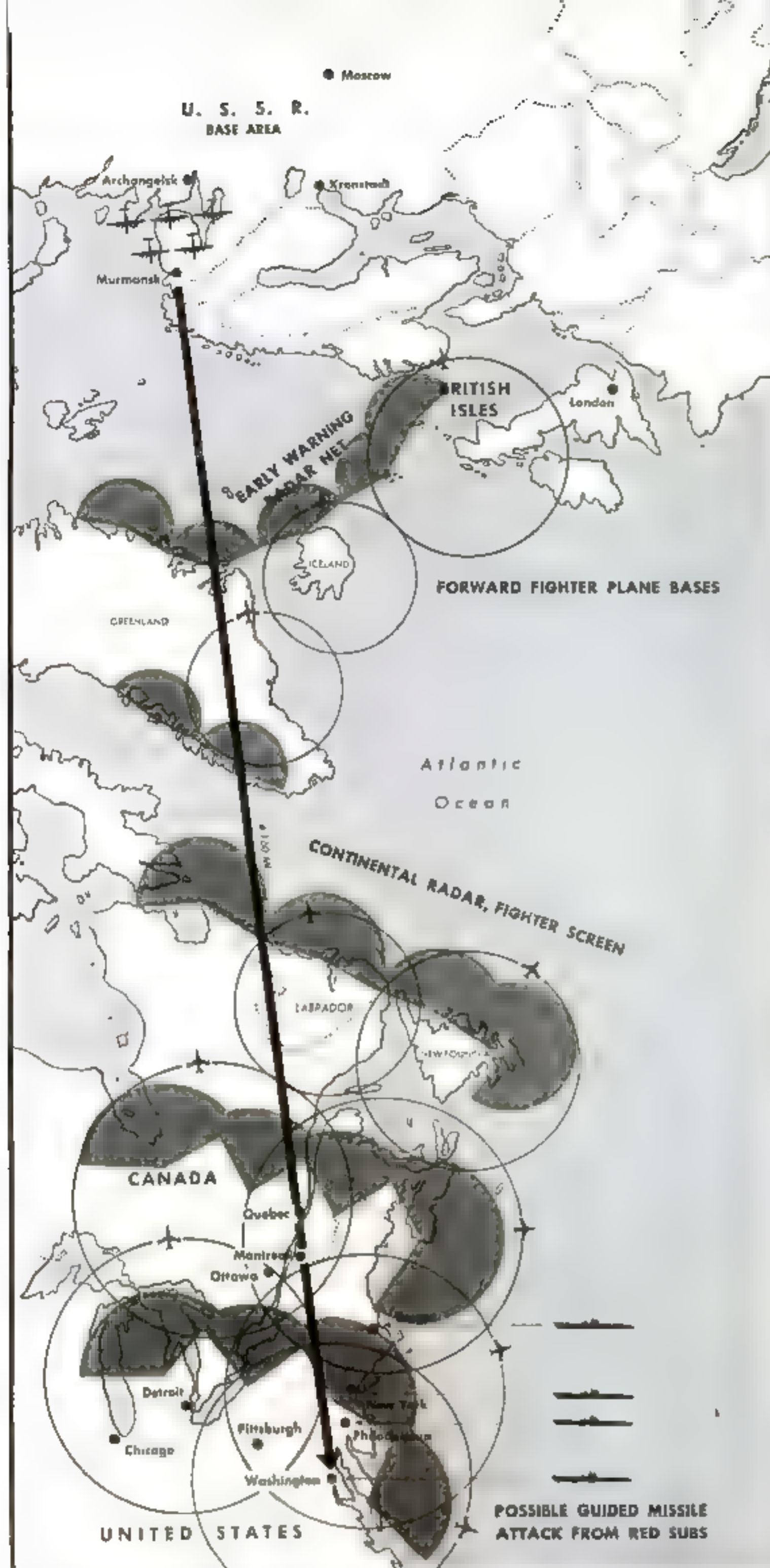
ful undersea fleet than Germany had at the start of the last war. Its 270 submarines include the latest Schnorkel-equipped U-boats which Germany developed too late in World War II. To oppose these, the U.S. Navy has a far superior surface fleet. But the work horse of antisubmarine warfare, the destroyer, is in short supply. There are only 136 destroyers in commission, plus a rusting and increasingly outmoded moth-ball fleet of 204 more. Americans confidently assume that U.S. industrial capacity would restore dominance in weapons if war came. But meanwhile the Russian advantage increases relentlessly, and the advantage in conventional armaments can be decisive, now that Russia has broken the atomic-bomb monopoly which had made Americans feel secure. Americans at last must realize that, in the era of long-range atomic war, America itself is finally vulnerable to sudden attack.

An opening blow by the Soviets could be a surprise atomic bombing of American cities and industrial targets. Russia today has a striking power not possessed in the last war either by Germany, which sent bombers only as far as Iceland, or Japan, which

as a scare gesture shelled the Oregon and California coasts from submarines and sent bomb-laden balloons floating aimlessly toward the Pacific Coast.

Russia at war presumably would try to knock out the U.S., now without an adequate radar-warning network (next page), before a superior force could be mobilized to take the offensive. It might launch a "disaster attack" in which long-range bombers would be thrown against American cities with the suddenness of Pearl Harbor but with far greater force. Cities from Seattle to Boston might be atomized in coordinated raids. The offensive could be sustained better if Soviet land armies first took Western Europe and the Middle East (maps, left).

But most U.S. military men believe, despite Soviet preparation and potential, that Russia could not confidently go to war for at least two years, even if her present strategy of trying to gain her expansive ends by threats and pressure proves insufficient. In those two years, by serious effort, the U.S. could make itself strong enough to diminish Russian confidence and reduce the danger to the world.



DEFENSE-IN-DEPTH against attack from Murmansk would require early warning radar stations and fighter plane bases as far as Greenland, Iceland and the British Isles. Dark semicircles indicate radar range, larger circles fighter range, both hypothetical.



SEARCH ANTENNA (left) at a radar station sweeps horizon like a lighthouse beam, picking up signals bouncing back from the surrounding terrain. Target entering the antenna's range shows up as a "blip" or light pattern on the face of the radar scope (right).



Danger of War CONTINUED

HOW MUCH FOR RADAR?

FULL PROTECTION IS TOO COSTLY, BUT WE MUST HAVE FAR MORE THAN OUR PRESENT SKIMPY WARNING NET

Early in World War II, long before our own coastal civilian defense volunteers began getting excited about yellow, blue and red "alerts," Britain put to work a device that made the human eye of the air-raid spotter strictly secondary. Scanning the skies with its own electronic eyes, radar could spot an airplane many miles away and register its position, speed and course as a "blip" on its own retina or scope. A sort of television camera, transmitter and receiver all in one, radar sought out ships behind smokescreens, airplanes behind haze. This superhuman vision gave it a tremendous function in national defense, beginning with the Battle of Britain: to detect, up to the limit of its range, approaching flights of hostile aircraft, and thus gain precious time for defense forces to intercept the enemy.

Like the atomic bomb, radar once was in effect, but no longer is, an Allied monopoly. Along Russia's coast, from Vladivostok north to the Arctic and west to Murmansk, the Soviets have presumably thrown a radar network functioning in depth. It is probably perfectly good radar, backed up by good fighter plane defenses (p. 20). By contrast, the U.S. has radar warning stations around only a handful of strategic areas and right now has no modern squadrons of night fighters ready to scramble on any warning they may get.

As one hesitant step toward creating a warning system worthier of the name, Congress last year authorized \$85.5 million for a partial radar screen around the U.S. and then neglected to appropriate any money. As a firmer step the Air Force took \$50 million, which it could ill afford, to get the program going. The money came out of its hide in across-the-board cuts which meant, among other things, a reduction in pilot flying time. In effect, of course, this was robbing Peter to pay Paul in the hope that Peter could temporarily afford it. Another \$50 million has been requested for the coming fiscal year, and last week Canada, whose air would be invaded first in any attack from the north, announced it was spending several millions more to extend its own thin radar net with stations near Halifax, Toronto and Vancouver.

The cost of an airtight radar screen of possibly more than 100 stations around North America is probably out of sight for both countries: to build one station in the far North and get it into round-the-clock operation with a 200-man crew costs over \$3 million. Within the defense establishment there is argument over where to place the basic core, which is all we can afford of the needed radar defense-in-depth (map at left). Should B-36 bases and atomic installations get top priority against atomic attack, or should industrial areas get it? We shall probably have to compromise on a half measure of protection for both, for even a \$17.5 billion military budget would provide only enough radar to assure critical areas a minimum warning time.

The pictures on these pages give some idea of how complicated an aircraft warning system can get. Besides its restless antennae and flickering scopes and well-protected operations rooms and human spotters between its far-flung stations, it even requires men who can write backward (opposite page). It also calls for fighter planes and antiaircraft guns, if its warnings are to result in anything besides panic. How the U.S., which was relatively rich in such items at the end of the war, is doing with regard to them now is shown on pages 28 and 29.



HEIGHT ANTENNA (left), which will be mounted on a steel platform like the search antenna, rocks back and forth like a rocking chair. It indicates the altitude of approaching planes as light patterns which are painted on the "height-finder" radar scope (right).





AIR DEFENSE CONTROL CENTER operating near New York area is dominated by a Lucite wall bearing map of northeast states, Great Lakes region, areas north and east. From scopes at radar stations, and other sources of information, plotters track every

plane in defense area, writing backward on plotting board with luminous pencils so controllers can read data more easily. Planes are identified by IFF (Identification, Friend or Foe) electronic signals. On approach of hostile planes center would alert Air Force bases.

Danger of War CONTINUED

HOW MUSCULAR

ITS SOLDIERS GAIN FIREPOWER

Now we take a good, hard look at the three armed services, whose job, bluntly stated, is to prepare to fight while our diplomats strive to make the fighting unnecessary. Last week the three service branches, still getting used to unification, were set for their biggest post-war combined maneuvers, Operation Portrex in the Caribbean. The Army's 3rd Infantry Division, having practiced landing operations near Norfolk (*bottom left*), boarded Navy transports for the maneuver area to take part in a coordination test involving 80,000 men, including airborne troops. Meanwhile, in the Yukon, 5,200 U.S. and Canadian soldiers were shivering their way through "Exercise Sweetbriar," which was an equipment and personnel test in 50-below cold. So far Sweetbriar had already proved that cold-weather clothing needed more research, that the U.S. Army's Weasel snowmobiles were a flop compared to Canada's husky Penguins (almost half out of 100 Weasels broke down in 5 days), and that the Arctic would be one hell of a place to have to fight a war.

To General J. Lawton Collins, Army Chief of Staff, Portrex and Sweetbriar were part of a plan to make his 10 Army divisions the most efficient and most nearly air-transportable the U.S. ever had, able to fight in all weather and on every terrain. They have to be at least that good, for if the Russians attack it will be with 175 divisions.

Although hugely outnumbered, our 10 divisions are potentially far more powerful units than their World War II counterparts. The present infantry division of 18,804 men has gained two thirds more firepower (*left*), having taken under its wing two battalions totaling 135 medium tanks, plus a reconnaissance company with nine light tanks and 34 armored troop carriers.

The firepower is potential because funds are lacking. Only one division, the 82nd Airborne, is at full strength in men and equipment. The others are undermanned, underequipped or both. In heavy tanks the Army has nothing but a prototype as compared to the Stalin (about 60 tons), which the



NEW WEAPONS give U.S. infantry greater firepower than in the last war. Of those laid out here, the small arms (*left, foreground*), mortars (*rear left*), automatic weapons

(*middle row*) and bazooka (*right foreground*) are familiar to last war. New are two recoilless guns (*right rear*) and the bazooka in front of them. Tank is 4-ton Pershing.



NEW KIND OF WARFARE gives Army a whole new set of problems to overcome. Above: preparing for arctic war, the soldiers of "Exercise Sweetbriar" move on skis

and snowshoes through 50-below cold of Alaska. Below: young nonveterans who now form Army learn amphibious lessons of last war rehearsing for Operation Portrex



ANTIAIRCRAFT MAINSTAY is still the World War II 90-mm. gun (*above*), effective up to 33,000 feet. Bigger guns are needed as new bombers fly above 40,000 feet

IS THE ARMY?

BUT ARE VASTLY OUTNUMBERED

Russians are building at the rate of 1,000 a year.

Nevertheless the Army is increasing the firepower of its units as rapidly as it can: this year's defense cuts have affected it least of the three services. Its foot soldier has been growing in stature, for he can now carry light artillery on his shoulder in the form of the new recoilless rifle. In place of the old 900-pound 37-mm. gun, he has a 44.4-pound recoilless 57 mm. which can be fired by one man. And there is a new 75-mm. recoilless gun, weighing only as much as a heavy machine gun, which can fire eight rounds a minute up to 7,200 yards. Against enemy tanks the infantrymen now have a new bazooka (right) which, from short range, can penetrate the armor of medium or heavy tanks. In antiaircraft the Army has a spectacular new "sky-sweeper gun," radar-operated, effective day or night against high-speed jet planes—and so expensive that the Army doesn't have many yet.

The soldier must still keep an eye on the air, for jets with the firepower of 30 howitzers can pour rockets into him and his support with murderous effect. Close support of ground forces, long a Red air force specialty, has been neglected by bomber-minded U.S. airmen but at Army insistence has recently been getting some attention.

This 10-division army, which incidentally has excellent morale within its units, is unlikely to get much bigger before it has to fight. It is a nucleus for expansion; its generals figure they have reserve strength, which is gradually declining, in World War II veterans. They also can count, but not heavily, on some National Guard divisions, now being reorganized as an M-day force, and on some organized reserves, who could fill gaps in the ranks but would need training on new weapons.

However many Russians every U.S. soldier might account for, the Soviet's edge in landpower is overwhelming. But with its share of a \$17.5 billion budget the Army could reduce it by making up armament deficiencies and by preparing to have full-strength regular units in a few of the areas where the State Department feels we must have strength.



JEEP-BORNE ARTILLERY is the 75-mm. recoilless gun. Because there is no recoil, it is fired from jeep without upsetting vehicle. It is also fired from tripod mount.



NEW BAZOOKA gives infantry a really potent anti-tank weapon. Its 8½-pound rocket shell can penetrate 11 inches of armor, enough to destroy any standard tank.

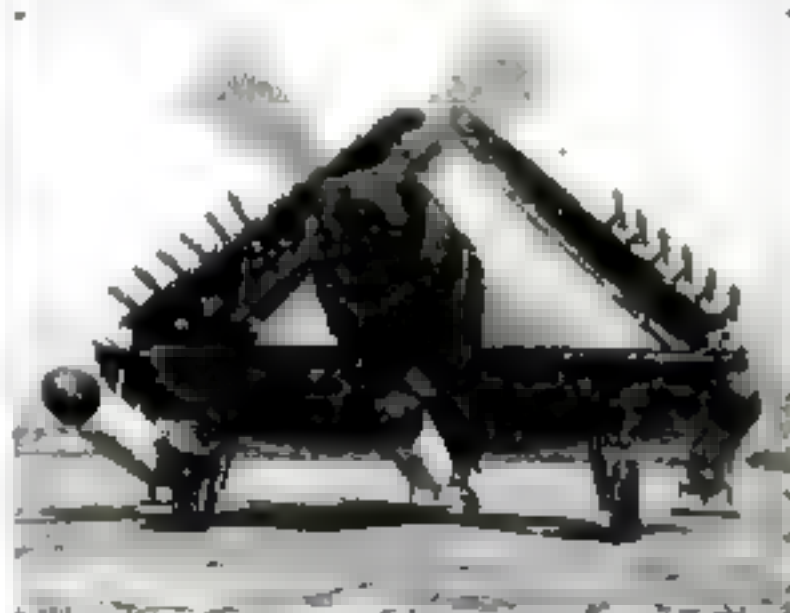
But for accuracy bazooka men must come within some 200 yards of a tank. Each infantry division is allotted 465 of these. Trumpetlike muzzle protects men from flashback.



U.S.S. "KENTUCKY," laid down as sister of *Mo*, lies half-born at Norfolk, Va. If research pays off and money can be had, the *Kentucky* may become the first big guided-missile ship.



MIGHTY MICE, 3-inch rockets, shoot out from Navy Skyraider. An unguided air-to-air weapon, Mouse will increase fighter firepower, help redress balance of fighter vs. bomber.



ABLE MABEL, the Martin AM-1 Mauler, is a heavily armed attack plane that can take off from carrier to hit ships and tactical targets with three torpedoes and 12 5-inch rockets.



PANTHER is Grumman's new F9F single-jet Navy fighter plane now being built in quantity for carrier squadrons. Almost as fast as sound, the Panther has climbed as high as 53,000 feet.



AEROBEE ROCKET is launched from the afterdeck of the research ship *Norton Sound* in Pacific. The Aerobee goes 65 to 75 miles up; the Navy is using it in guided-missile research.



ANTISUB PLANE P2V-4, sister ship of long-range Truculent Turtle, carries both detection devices and rockets, bombs, mines and guns to destroy the submarines when found.



CUTLASS is unconventional twin-jet fighter with afterburners for extra speed. Still in early stage, it is in 700-mph-plus class at high altitude, is readily adaptable as a night fighter.



TURBOPROP ENGINES, at which U.S. lags behind Britain, go into Convair XP5Y-1, successor to the famed PBV patrol bomber. The turboprop combines propellers and jet thrust.



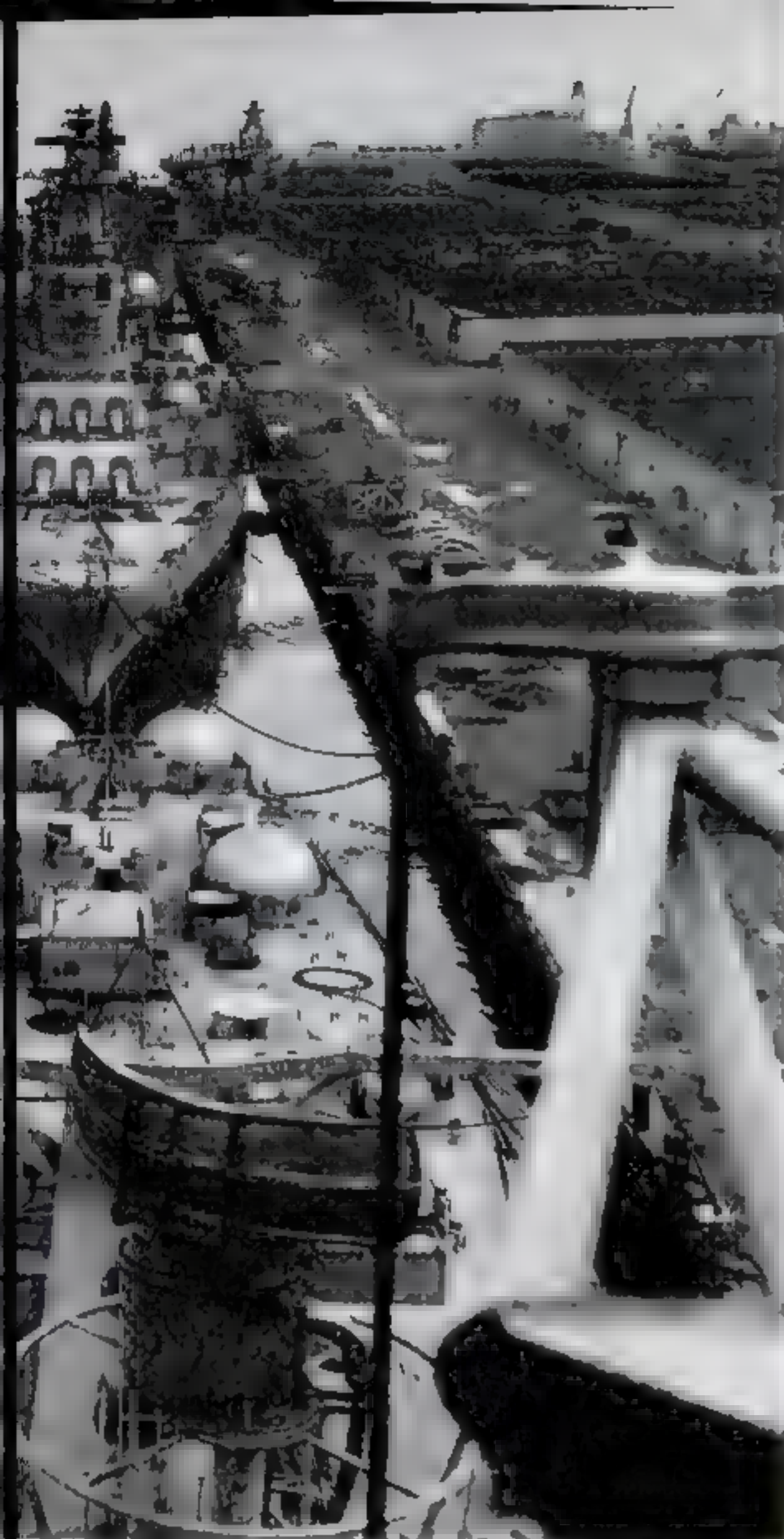
BATTLESHIPS "WASHINGTON," "NORTH CAROLINA" LIE WITH

HOW NEW A NAVY IT SHOULD MODERNIZE MOTH-BALL SHIPS,

In the pictures that surround this island of words you can get a rough idea of the present state of the U.S. Navy. Within the stringent limits of a \$13.5 billion defense budget, it is hard at work on new weapons (*left*) and trying to make up for lost time on antisubmarine warfare (*right*). Its Marine Corps, whose tactical air arm has been more than cut in half, is fighting the threat of extinction but has come up with the brand-new tactical concept of helicopter assault (*below*), by which a beachhead many miles in depth can be quickly established. When it comes to ships, the Navy is not so well off. It has enough for its unique, if secondary, function as a diplomatic persuader, i.e., to have a carrier and its escorting ships hanging around the Mediterranean during an Italian election. It does not have enough ships for its traditional and primary function of controlling the sea and protecting sup-

BEHIND SMOKE SCREEN LAID BY FIGHTERS, MARINE CORPS





BATTLE CRUISERS (FOREGROUND) IN MOTH BALLS AT BAYONNE

SHOULD WE HAVE?

IMPROVE WEAPONS FOR AIR AND SUB WAR

ply lines, particularly under the shifting balance of power that sees Russia striving to quadruple by 1952 its fleet of 270 submarines, which is two to every U.S. destroyer. Stripped of overhaul funds last year, the Navy's vast moth-ball fleet (above) is going to rust and ruin although a few million dollars a year would keep up all the first-wave ships that would be needed in the first 12 months of a war. The Navy is not now laying down any new ships; it has a restricted program of modifying its existing fleet. What it needs most and could accomplish under a \$17.5 billion budget is: to increase its carrier fleet from seven to 12 by recommissioning five moth-ball carriers; to double its carrier air groups, from nine to 18, and put pilots through transition training from World War II planes to the modern ones shown at left; to build a few prototype combat ships, largely for antisubmarine work.

HRP-1 FLYING BANANA HELICOPTERS LAND ASSAULT TROOPS



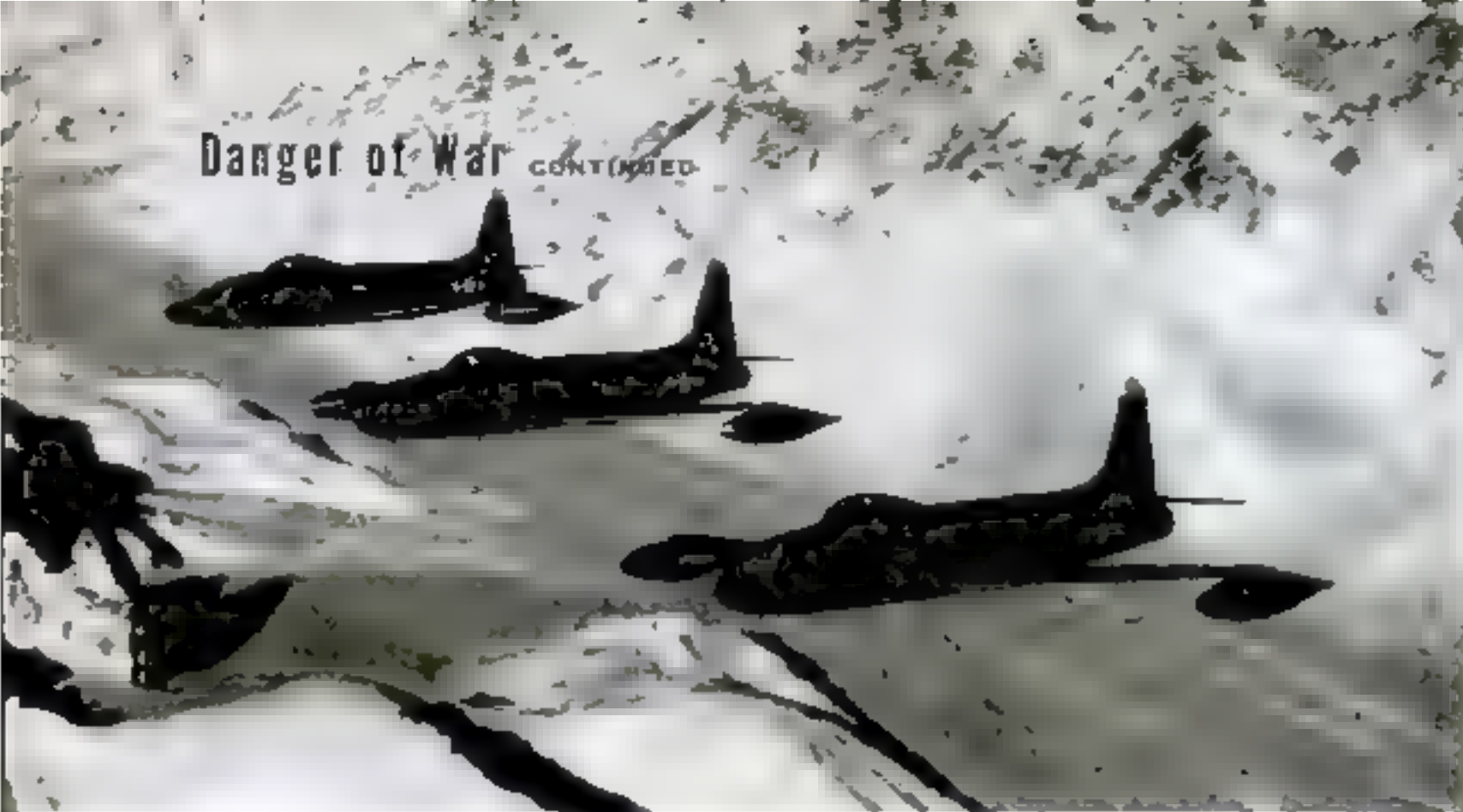
Seven times in World War II the balance shifted between the submarine and antisub weapons. Although they never had more than 118 submarines at large on the Atlantic, the Nazis came close to controlling the sea lanes. Today the balance favors the submarine—and Russia has 270 available with hundreds more on the way. With our coasts exposed to guided missiles launched from subs, Admiral Forrest P. Sherman, new chief of naval operations, has revived Navy's lapsed antisub program, added \$78 million to step up work on weapons like those below.



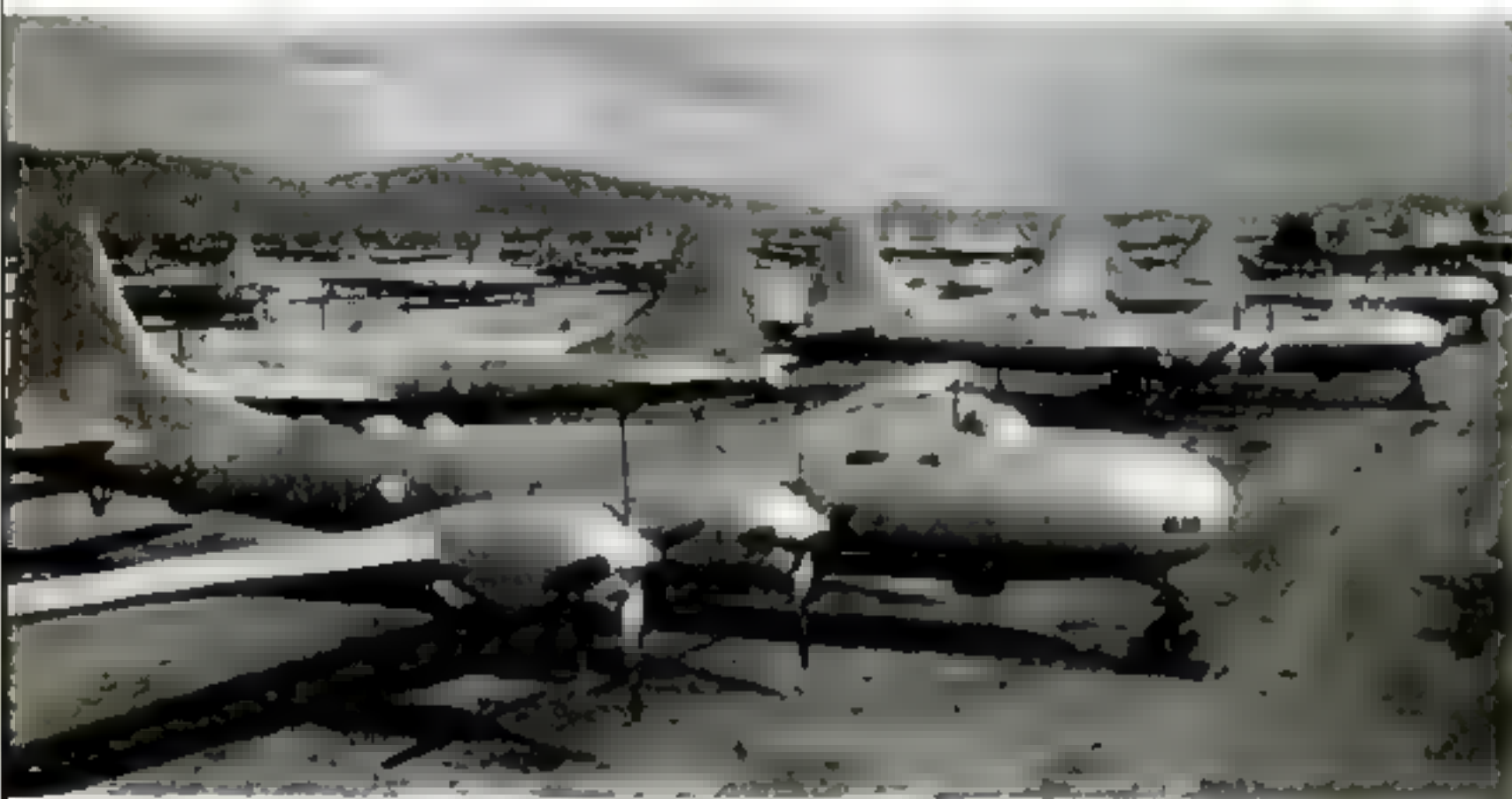
HEART-SHAPED PATTERN in the sky is formed momentarily by a fusillade of 21 Hedgehogs—an antisubmarine bomb rapid fired like a flight of arrows from a destroyer's launching device. The Hedgehogs, stabilized by fins, scatter over a wide area, explode upon contact with a submarine or bottom. They augment the destroyer's now obsolescent "ash cans" and K-guns.



DREAD SHAPES to any submarine commander are these three basic elements of an ASW hunter-killer force, photographed through periscope of American submarine in an experimental area off Key West. All are radar-equipped. Blimps and patrol planes hunt down the sub and drop sono buoys, which send automatic radio tracking signals, and the destroyers move in for the kill.



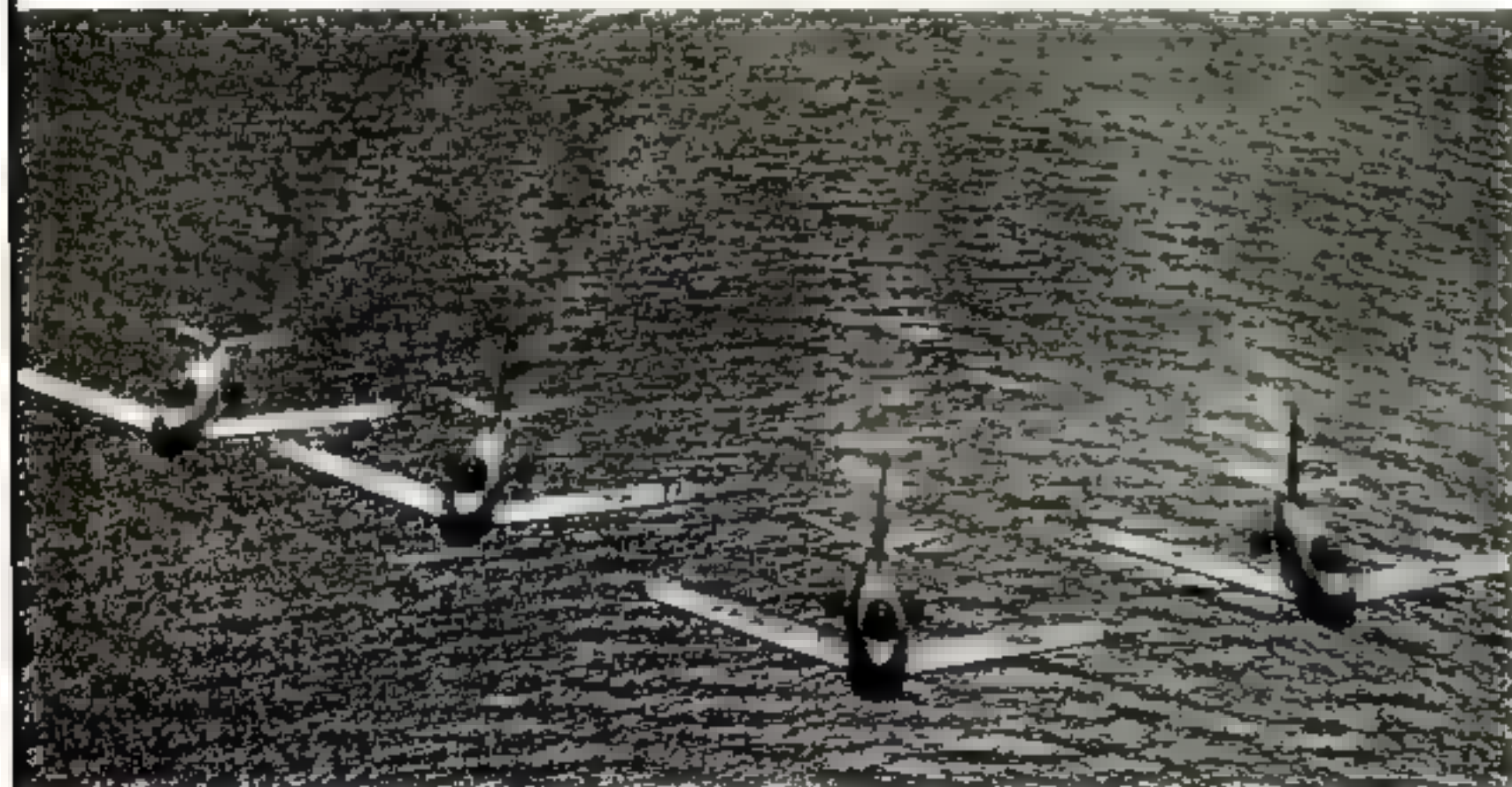
WORK-HORSE FIGHTERS right now are the 600-mph F-80s. Squadrons of them are now based in Alaska (above), in Germany and Japan. F-80 was the Air Force's first operational jet, flown experimentally before the end of last war. We have 1,500 of them.



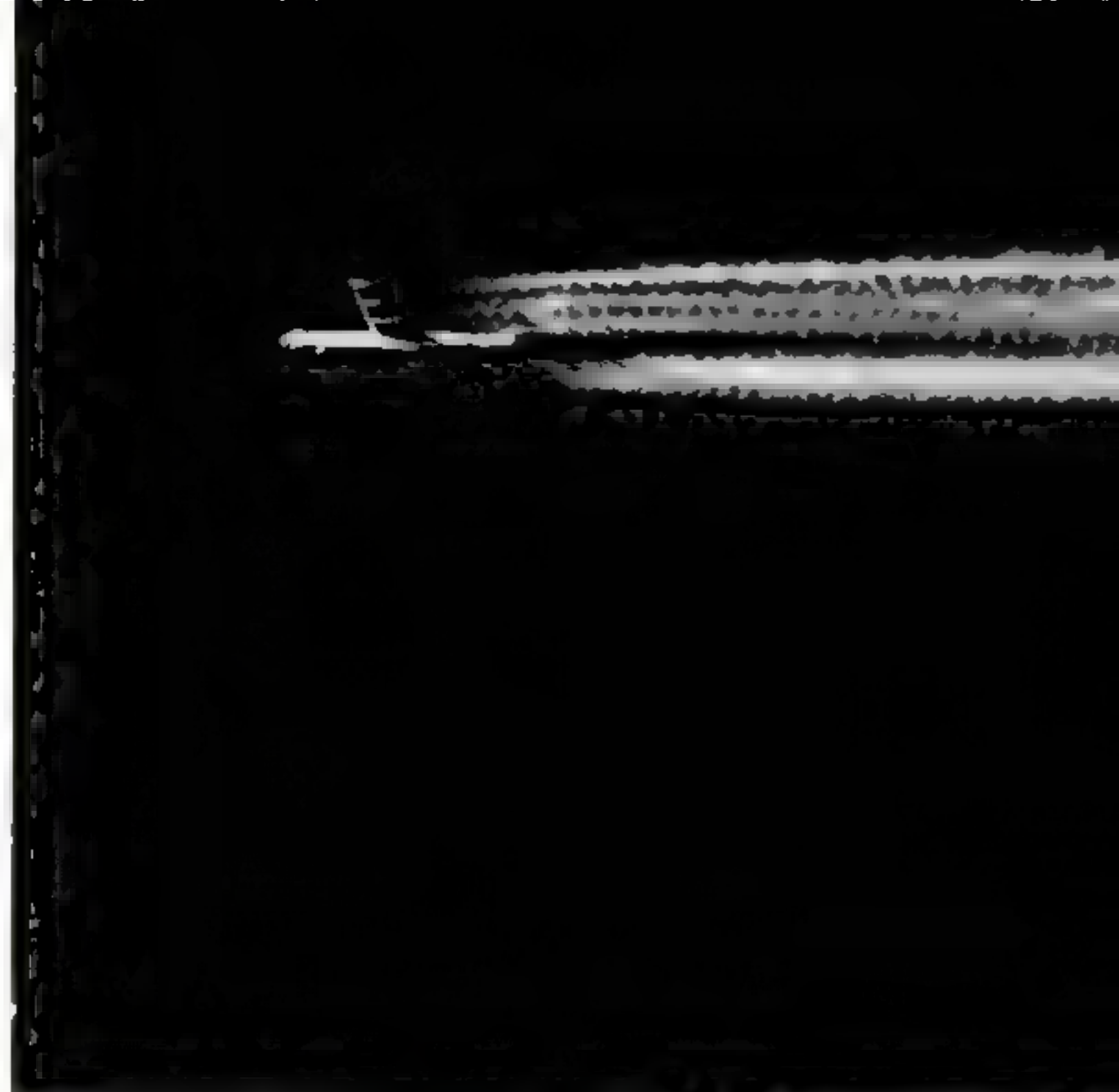
EARTH-BOUND BOMBERS, old B-29s, veterans of the Pacific war and of questionable strategic value in modern aerial warfare, are preserved in webby plastic coverings and are stored in scattered areas. Some have been demoted for shipment to England.



LIGHT BOMBERS of the class of these 500-mph high-altitude B-45s could deliver a heavy bomb tonnage on Russian supply lines if based in Alaska, the Middle East and England. B-45 is replacing older vintage light bombers—but slowly. We have less than 50.



FASTEST FIGHTER in operation is F-86, which holds official world's record of 670.9 mph. Able to reach 40,000 feet within five minutes, it will soon be our chief weapon for stopping enemy bombs. These are from 4th Fighter Group, Langley Air Force Base, Va.



HOW MUCH AIRPOWER?

WE HAVE SOME GOOD PLANES BUT NOT ENOUGH OF THEM

The airplane sky-writing its vapor-trail signature across these pages is the world's best intercontinental bomber. The six-engine B-36 is the plane upon which the Air Force relies to deliver the weight of our retaliatory attack (for the U.S. never attacks first and cannot have the advantage of surprise) on any enemy. We have fewer than 60 of these great strategic weapons on hand, plus slightly over 100 on order. If war should come between now and 1952, we would have to rely mainly on the B-29 of World War II, a once-great bomber and big enough to tote an atomic bomb but now obsolescent and moth-balled (left). We would have only sample copies of the B-47, the first big jet bomber. Against us Russia



F-80 IS NEW NEEDLE-NOSED NIGHT FIGHTER

could send 350 B-29-type bombers which they are building at the rate of nearly 200 a year, and they may have a counterpart of the B-36 on the way. Our ability to intercept an aerial attack is limited for the same reason our ability to launch one is limited: because our modernization program is geared to the level of 48 air force groups, dictated by President Truman, instead of the 70 groups requested by airmen and authorized by Congress. We have fewer than 10 interceptor air groups equipped with such speedy, high-flying planes as the F-86 and F-84, and have none with all-weather, night-fighting F-89 (inset left) or the long-range, bomber-escorting F-90 (inset right), both twin jets. At our present level of purchasing we may not even have an up-to-date 48-group force in 1952 but only about 30 groups. Our aerial armament lags behind the trans-sonic and supersonic planes that carry it. The fighter pilot's great speed actually works against him, giving him too little time to sight and fire conventional guns. Much more research money is needed to extend the range or the sighting and firing time of weapons and to perfect air-to-air target-seeking missiles that can be launched from greater range and without accurate sighting. An additional \$1.5 billion is needed in the Air Force budget to restore existing groups to full strength, to bolster procurement to a rate that will provide a 70-group air force in two years and to give that force adequate armament. A billion and a half dollars is a lot of money, and \$13.5—or \$17.5—billion is enough to buy a wondrous lot of things if it did not have to be spent to buy peace and/or preparedness. But the need for spending is almost beyond argument (see editorial on following pages).



F-90 IS LONG-RANGE PENETRATION FIGHTER

▲ **HIGH-ALTITUDE INTERCEPTION** by two fighters of a vapor-trailing B-36 near 40,000 feet is shown in this dramatic picture. Plane at bottom is F-84, other is the speedier F-86. B-36 carries 16 20-mm. automatic cannons to thwart interceptors.

▼ **LOW-ALTITUDE TROOP SUPPORT**, which the Army needs very badly but woefully lacks, is the mission of the F-84 fighter (*below*). Plane has just launched two 11.75-inch and 16 5-inch high-velocity rockets—more than a destroyer's salvo.



THE ELEMENTAL FACT OF 1950

This is the age of obliteration. Formal war between the possessors of nuclear weapons means the obliteration of society as most of mankind—Communist and non-Communist—now knows it. Therefore it is necessary to avoid war, to control nuclear weapons and to fashion a formula for permanent peace.

Opposed to these necessities is the elemental fact of 1950: The enemy of the free world is implacably determined to destroy the free world.

This enemy cannot surrender and cannot make peace. The makers and leaders of Stalinist thought have said again and again and again that the object of Soviet Communism is "the victory of Communism throughout the world." They have also said that this victory is essential to the safety and welfare of the Soviet Union itself. Their own system is so grounded upon this objective that it has become a driving necessity; to abandon it would be to invite the collapse of their system and the destruction of themselves.

There can be no compromise and no agreement with Soviet Communism. It is not merely that Soviet Communists refuse to fulfill agreements. It is that they use compromise and agreement to destroy those with whom they compromise and agree. Any compromise, any agreement can only be, so far as the Communists are concerned, a further stage in the war which they continually wage.

Every relevant act and attitude of Soviet Communism during the first years of the atomic age compels the conclusion that any atomic agreement acceptable to the Communists would be used by them as every other agreement has been used—to further "the victory of Communism throughout the world."

When and in what situations Soviet Communism will proceed from informal war to shooting war is unpredictable. It is conceivable that the Soviet Communists will not choose shooting war as the method of final decision. Stalin himself has often expressed contempt for war ("imperialist war," of course) as a solution. But the military power of the Soviet Union is a vaunted instrument of world Communism. Its propagandists continually boast of the Soviet Union's military might. What they studiously avoid is any predefinition of the situations in which Soviet Communism would resort to shooting war (excepting attack upon the Soviet homeland). Therefore the strategists of the free world cannot calculate with certainty that this or that choice, decision, situation will make for shooting war or avoid shooting war. All-out war is never predictable. But it is always possible.

This week *LIFE* appraises the military defenses of the U.S. in the light of the military capacity of the Soviet Union. This appraisal is undertaken in awareness that the problem of U.S. defense is not entirely a military problem. The American people could make no worse mistake than to assume that there is safety in military defense alone, however massive and costly the defense may become.

Then why undertake such an appraisal?

First, although there is no sure safety in military defense alone, there is sure ruin in any miscalculation or neglect of military defense.

Second, the wisdom and adequacy with which the officials who are in charge of U.S. policy calculate the defense necessities of the time provide a measure of the wisdom and adequacy with which they calculate the total necessities of the time.

The net showing of our report is that the defense necessities of the U.S. have been avoidably underestimated by the President, by his Secretary of Defense and (to the extent that they have participated in final policy decisions) by the chiefs of the military services. Not in extenuation of these officials but to indicate the scale of the turn-about in attitudes and policy now required, this must be added:

The official estimate of U.S. defense necessities has on the whole been welcomed by the U.S. Congress, the public and the press. The dominant desire has been to let the post-war economy run its course toward full civilian abundance. Most everybody had come to realize that the U.S. was in something called "the world conflict," that the conflict might even be called a kind of war and that a certain amount of dollars and goods had to be put up for the fight against Communism, which most everybody had come to detest. But hardly anybody really thought that the U.S. was really in a real war, a war for survival that might cut into the civilian economy and take more out of it than the U.S. has as yet been willing to pony up.

Now, chunk by chunk, the walls of illusion are falling away.

COMMUNISM AND THE OFFICIAL MIND

Some of the facts confronting the U.S. and all mankind are summarized in the column on the left of this page. They are terrible facts, adding up to the single, elemental fact that Soviet Communism is committed to the destruction of the free world. This elemental fact is still not accepted, not in its entirety and not in its full meaning, by millions who think in one corner of their minds that they do perceive the innermost fact of the Communist enemy but with another corner of their minds decline to accept and act upon the full implications of the

fact. This is fatefully true of all too many of the men who mold and execute Western thought and policy.

Consider Dean Acheson, the U.S. Secretary of State. He recognizes more and more of the separate facts of the conflict, but he still shrinks from the final fact. On Feb. 8 Mr. Acheson said in a carefully considered statement that the Soviet system "is incompatible with a world situation which is based on peace" and concluded that only agreements based on the facts of power mean anything. So far so good—the statement was a decided advance on anything Mr. Acheson or any other Administration spokesman had said previously. Yet Mr. Acheson, speaking of "the achievement of peace," seemed to assume (as he has always assumed) a point at which accommodation if not formal agreement with Soviet Communism would be possible.

NOW THERE IS NO TIME FOR LEARNING

Or consider Mr. Acheson's boss and admirer, President Truman. In an authorized interview with the *New York Times* the President said last week that he had given up any hope of meaningful agreement with the Soviet Union some years ago (although he has been talking confidently of getting over-all agreement within the past year). He said that in 1948 he wanted to send Chief Justice Fred Vinson to Moscow to "straighten out Stalin" and would have done so if the campaign had not been on. He indicated that he still has this in mind to do "some time." He also said (as paraphrased by the *Times*), "The real trouble with the Russians is that they are still suffering from a complex of fear and inferiority where we are concerned." Evidently the President still does not understand the real trouble with the Soviet Communists. It is, as cannot be said too often, their fixed purpose to promote by every possible means the destruction of all non-Communist societies.

Urgent demands for "one more talk with Stalin" are heard on every hand. Another talk with Stalin may be in order. But not on the assumption that any deal with Soviet Communism can enable "the two worlds" (as Winston Churchill put it last week) to live their lives in separate peace. Statements assuming that the two worlds of freedom and bondage can do so, render a twofold disservice. First, they obscure and postpone the total understanding of the enemy's purpose which is necessary if Soviet Communism is to be repulsed and in the end defeated without universal disaster. Second, they unwittingly serve one of the main purposes of Soviet Communism's world propaganda. Soviet propagandists are doing their utmost to cultivate in the Western mind a sense of responsibility for "creating a war situation,"

OF THE ENEMY

a guilty conviction that the West is somehow failing to do all that it might to achieve agreement with a foe who makes agreement impossible. However inspired they may seem, however deep the yearning they may assuage, statements which elide or overlook the dedicated enmity of Soviet Communism are so much grist for the Soviet mill of guilt.

Official and public understanding of the Soviet enemy has advanced considerably since Yalta and Potsdam. It has improved appreciably in the last year or so. Statesmen learn. We all learn. But now there is no more time for learning.

Two aspects of Soviet Communism deserve special attention. They suggest that even the Communist mind is not immune to the pressures of the time—and that the first duty and best hope of the free world is to gird and guard its strength. These aspects are:

1) Rigid in purpose though it is, rigid in attitude though it always seems, Soviet Communism has its own peculiar doctrine of change to meet changing circumstance.

2) Soviet Communists are schooled to believe that the final assault must come only when the forces of anti-Communism are so rotted and so weak, and when the forces of Communism are so strong, that the outcome is calculably certain. Stalin himself has told his followers again and again that they must wait . . . wait . . . wait until the world situation is "ripe" for victory.

WATCH FOR A SHIFT, BUT NEVER COUNT ON IT

Anything that smacks of departure from the fixed doctrine of Soviet Communism is justified to the faithful on the ground that the doctrine has been newly "enriched by experience." In the past this theory of enrichment has never altered the end purposes of Soviet Communism. But it has cloaked many important shifts of immediate aim and attitude—from revolutionary internationalism to Soviet nationalism, and then back to the present militant internationalism, for example. No less for Soviet Communism than for the free world, the age of obliteration is likely to be a most "enriching" experience. The fact that atomic enrichment has as yet had no discernible effect in Moscow need not mean that it will never have.

What is needed is a precise yardstick by which to measure what to hope for and not to hope for. As we see it, the proper yardstick runs something like this:

To hope for any slackening or change of Communist purpose is worse than idle. To hope for any lasting agreement, balance of force, accommodation of aim and circumstance which will enable the two worlds of freedom and Communism to live side by side in permanent peace is worse than idle. But to hope that the prospect of mutual

obliteration will sink in upon and affect the guiding minds of Soviet Communism is not idle. To hope in turn that it will alter the enemy's calculation of what pays and does not pay—of what does and does not constitute a situation assumed to be "ripe" for final Communist assault—is not idle. To hope further that the prospect of mutual obliteration will seep home to the peoples of the Communist world, as it is now seeping home to the peoples of the free world, is not idle. To hope finally that the enormous pressures engendered by these processes of realization will compel a shift of Soviet Communism's attitude toward the uses and control of ultimate weapons is not idle. To watch for such a shift—never to count upon it, never to mistake it for a fundamental change of purpose, but always to watch for and seize upon it if it occurs—is the task of Western statesmanship.

THE SUPREME QUESTION: HOW STRONG IS FREEDOM?

We have said, the free world must know its enemy. But knowing the enemy is not enough.

The free world must know itself. It must know—it must never forget—that its freedom and its strength are one. Without freedom it cannot have strength. Without strength it cannot preserve freedom. Without the will for freedom it cannot have the strength of freedom.

At this hour of this age these are not empty words. They have a very present meaning for free men, and especially for free Americans who guard the source and center of the free world's strength.

The danger and the power of obliteration on a nuclear scale are new to mankind. Only now, five years after Hiroshima, is the prospect coming home in its full meaning to Americans. As it must for all men, it will affect the lives, the ways, the standards of Americans. The supreme question—and the sooner it is spelled out the better—is whether it will alter the American idea and the American love of freedom.

The national habit, the good habit, is to say as a matter of course that freedom is something to enjoy, to defend, if need be to die for (though preferably not in person). The habit and the idea of freedom have been stronger than any force yet arrayed against them. Are they stronger, will they be stronger than the prospect and power of obliteration? The accustomed "what is life without freedom?" takes on an unaccustomed meaning when there is the prospect of no life. What price the free life in the free society, free men will ask, if to defend freedom is to risk all life and all society?

These are the questions, this is the risk that Americans will be living with until further notice.

WHAT TO READ IN 1950

LIFE herewith offers a check list of recommended books, available at stores or libraries, for the reader who wants to bone up on the problems of 1950.

THE ATOM

EXPLAINING THE ATOM, by Selig Hecht, Viking Press, 1947, \$2.75. The best primer of atomic information we have found.

THE SMYTH REPORT (Atomic Energy for Military Purposes), Princeton University Press, 1946, \$2. Still the most complete repository of information on the A-bomb.

NO PLACE TO HIDE, by David V. Bradley; Little, Brown & Co., 1948, \$2. All about radiation at Bikini, and none of it pleasant.

MODERN ARMS AND FREE MEN, by Vannevar Bush, Simon & Schuster, 1949, \$3.50. The boss of wartime U.S. science describes the newest weapons of war, argues that free science can beat slave science.

THE ENEMY

HISTORY OF THE COMMUNIST PARTY OF THE SOVIET UNION (BOLSHEVIKS), by a Soviet Communist commission, International Publishers, 1939, \$2. Still official, still revealing on ultimate Communist purposes. To be read with salt.

PROBLEMS OF LENINISM (Selected Writings of Josef Stalin), International Publishers, 1942, \$1.50. Propaganda, of course, but there's a lot to be learned in and between the lines about the nature of Stalinism.

LENIN (A Biography), by David Shub, Doubleday & Co., Inc., 1948, \$5. Anti-Communist light on the priest of Marxism.

STALIN: A POLITICAL BIOGRAPHY, by Isaac Deutscher, Oxford University Press, 1949, \$5. Heavy going, but a wonderful account of the life and mind of the Kremlin's master.

THE WORLD CONFLICT

ROOSEVELT AND HOPKINS, by Robert E. Sherwood, Harper & Bros. \$6. Friendly, but also the best account yet of how things got in the present mess.

MY THREE YEARS IN MOSCOW, by Lieut. General Walter Bedell Smith, J. B. Lippincott Co., 1950, \$3.75. Why you can't make friends with the Russians when you try.

SPEAKING FRANKLY, by James F. Byrnes, Harper & Bros., 1947, \$3.50. Restrained, specific, convincing in its account of Soviet hostility during Mr. Byrnes's tenure as Secretary of State.

THE COMING DEFEAT OF COMMUNISM, by James Burnham, John Day Co., Inc., 1950, \$3.50. A forcefully presented formula for victory without war: get on the offensive, don't be scared, step up political, economic and psychological counterattack.



JOINT CHIEFS ARE FROM LEFT TO RIGHT: AIR FORCE'S HOYT VANDENBERG, CHAIRMAN OMAR BRADLEY, ARMY'S J. LAWTON COLLINS, NAVY'S FORREST SHERMAN

THE JOINT CHIEFS OF STAFF

THREE GENERALS AND AN ADMIRAL CARRY THE BURDEN OF PLANNING AND BUILDING THE U.S. DEFENSE

Seated at a Pentagon conference table above are the four men on whom the problems outlined in the preceding pages weigh most heavily. Three of them are the commanders of the three services—General Hoyt Vandenberg of the Air Force, General J. Lawton Collins of the Army, Admiral Forrest Sherman of the Navy. As the Joint Chiefs of Staff, they meet with General Omar Bradley, not only as commanders of their own services but as staff officers to the commander in chief. They come together usually once a week to plan the over-all

acquisition and disposition of men, weapons and supplies and to decide which service shall be responsible for which specific military task. In a war they would plan and direct American strategy.

Youngest man on JCS is Hoyt Vandenberg, 51, a handsome, quiet air strategist, wartime commander of the 9th Air Force. The Army's man is "Lightning Joe" Collins, 53, tough commander of the VII Corps at the capture of Cserbourg and the Saint Lô breakthrough. Newest member of JCS is Admiral Sherman, 53, planning officer for Ad-

miral Nimitz in the Pacific during the war and U.S. naval commander in the Mediterranean during the Greek political crisis in 1948-49. A frank, bold-thinking man, he has brought a deep knowledge of international law to JCS and has raised his colleagues' sights to the scholarly level of geopolitics. Fourth man on JCS is Omar Bradley, 57, wartime commander of the Twelfth Army Group, who acts as nonvoting chairman. He referees the meetings, takes any disagreement he cannot resolve to Secretary of Defense Johnson or President Truman.

FOR FRESH-TOMATO FLAVOR, MILLIONS SAY:

NO TOMATO JUICE LIKE CAMPBELL'S!

THE REASON IS SIMPLE—



1

World's Finest Tomatoes

—Carefully selected from the world's finest crops. And Campbell's Tomato Juice is produced only when the crop is at its peak of red-ripeness, the tomato flavor at its best.

+2

Campbell's Special Process

A scientific process safeguards the fresh-tomato vitamins and retains the fresh-tomato flavor. . . . Nature made it a grand drink; Campbell's keep it that way for you to enjoy.

=3

Campbell's Fresh-Tomato Flavor

This is the luscious lively taste you want. For right-off-the-vine flavor insist on Campbell's Taste why millions say "No tomato juice like Campbell's!"

Campbell's
TOMATO JUICE



Fresh-Tomato Flavor
—that's why folks choose Campbell's!

*No Sing high
Sing low!*



To celebrate the Green Giant's
FRED WARING WRITES A

New Happy

**A birthday gift for you from the Green Giant!
Send for sheet music and record of Fred Waring's
new birthday song hit.**

Twenty years ago the Green Giant was making his first appearance in magazines all over the country. Since that time, his picture on a can of Niblets Brand Corn or Mexicorn, Del Maiz Brand Cream Style Corn or Green Giant Brand peas has come to stand for good eating everywhere.

In honor of his jolly friend's birthday, Fred Waring has satisfied a secret ambition. He has written a truly great birthday song—the first new birthday song in years and years. It's a rollicking, joyful tune that you'll want to sing and play at every birthday party from now on.

The Green Giant wants you to have the sheet music and unbreakable record of this great new song. The coupon below tells you how to get both. Send coupon in today.

*Actually "born" in 1926, but
it was just 20 years ago when
the Green Giant began ap-
pearing in national magazines.

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FROM THE

**LADIES—here's your man for corn
and peas!** His corn has the
"roastin' ear" goodness, the
fresh-shucked flavor of corn-
on-the-cob *without* the cob. His
peas are "packed at the fleeting
moment of perfect flavor"—
sweet, tender, dewy-fresh.
There is nothing finer.



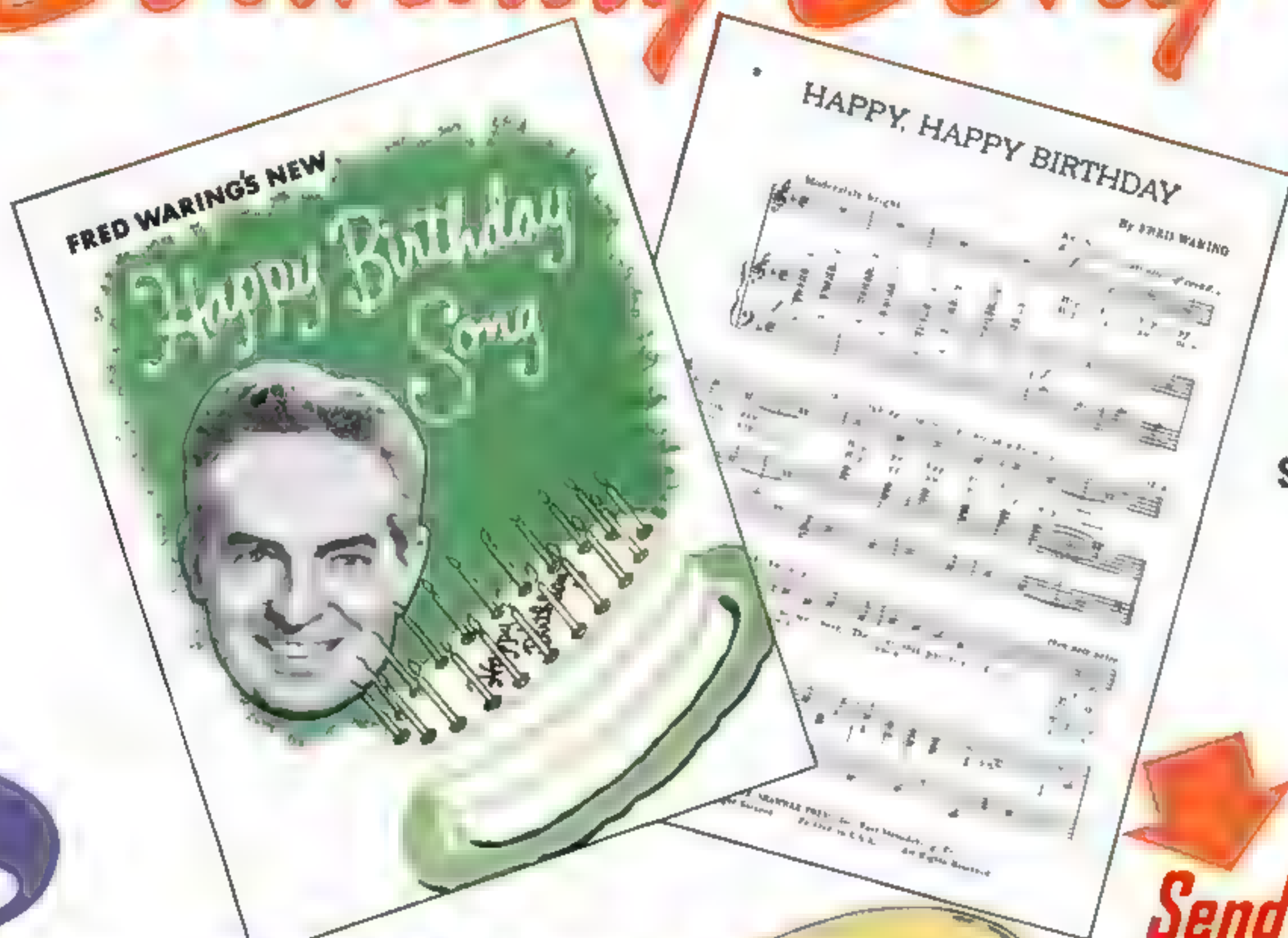


*Sing one
Sing all!*

Listen to Fred Waring's wonderful new birthday song Saturday mornings on his NBC radio show for the Green Giant. You'll hear this joyful melody played and sung at birthday parties for years to come!

20th Birthday!*

Birthday Song



**Send for the sheet music
and record today!**

(see coupon below)

SHEET MUSIC—Standard size. Complete score and lyrics of this great new song with suggestions for use on special occasions.

VINYLLITE RECORD—An unbreakable 6½-inch record by Fred Waring, which plays on any 78-R.P.M. phonograph. The Happy Birthday song is on one side and the famous Fo-Fum-Fi-Fee radio theme song on the other side.

Send no Money

just labels from any Green Giant products:
NIBLETS CORN, DEL MAIZ Cream Style CORN
NIBLETS MEXICORN, GREEN GIANT PEAS

GREEN GIANT, Dept. L, Le Sueur, Minnesota
Please send me, postpaid, Fred Waring's "New Happy Birthday Song" as checked below.

- ☐ **SHEET MUSIC.** I am enclosing one label.
☐ **VINYLLITE RECORD.** I am enclosing two labels.
☐ **BOTH SHEET MUSIC AND RECORD**—I am enclosing three labels.

Name _____

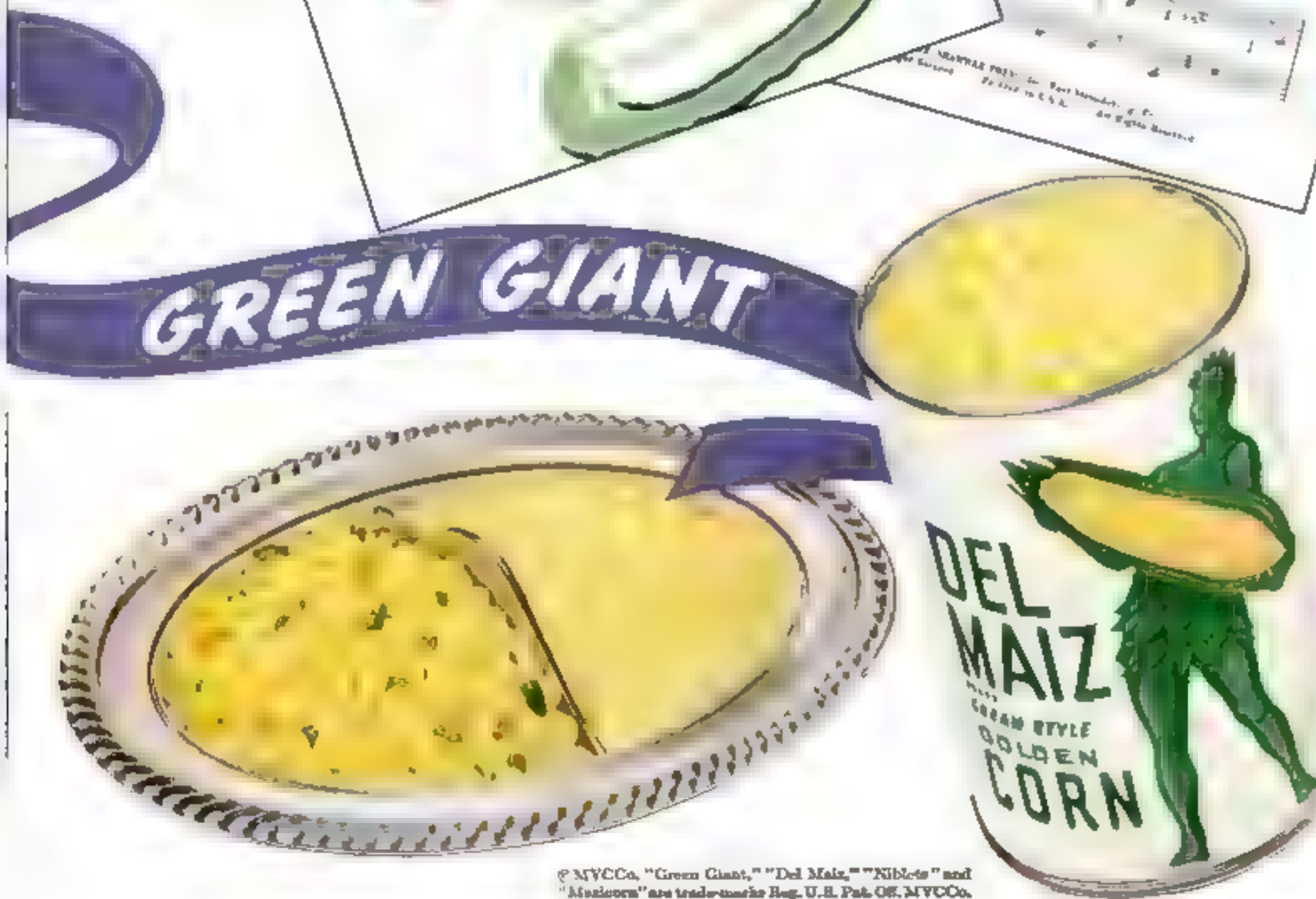
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Offer expires April 17, 1950

Minnesota Valley Canning Company, headquarters, Le Sueur, Minnesota; Fine Foods of Canada, Ltd., Tecumseh, Ontario.

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Famous gun owner of New York, Mr. Abels found this authentic 100% Grain Blend of Hunter Whiskey its true value. He picked it up for \$98. And today this collector's cream of bounty is worth \$1,000 in pure gold. It is considered a wonderful buy at 10 times its purchase price!

If you know value, you'll agree . . .

at today's low price, **HUNTER**—long famous as America's luxury blend—is an exceptional value in whiskey . . . with a superior flavor no one has been able to copy in ninety years!





AT MRS. ROOSEVELT'S TELEVISION "TEA," DR. HANS BETHE READS A STATEMENT WHILE DAVID LILIENTHAL (SECOND FROM RIGHT) REGISTERS DISAGREEMENT

THE SOUL-SEARCHERS FIND NO ANSWER

In the face of the world crisis and the H-bomb they foresee annihilation but not how to forestall it

The melancholy state of world affairs and President Truman's decision to make the hydrogen bomb set off three weeks of soul-searching on the part of American scientists and statesmen. Some considered only the moral issues, others merely the practical issues. But most wrestled with both—and with thoughts of the U.N. and American and Russian military potential as well. None found a real answer.

As the thinkers stood in what many deeply believed to be the shadow of death, some found comfort in groups. Thus 12 top scientists, members of the American Physical Society, spoke in unison: "We believe that no nation has the right to use such a bomb, no matter how righteous its cause. This bomb is no longer a weapon of war, but a means of extermination of whole populations. Its use would be a betrayal of all standards of morality. . . ."

In New York another group—the most august that gathered anywhere to discuss the problem—issued no joint statement but several individual ones. This occurred on Feb. 12, when Mrs. Franklin Roosevelt presided over the first of her series of television "teas." Among the guests (left to right, above) were Dr. Hans Bethe, physicist at Cornell; Senator Brien McMahon, chairman of the Joint Congressional Committee on Atomic Energy; David Lilienthal, recently retired head of the Atomic Energy Commission, and Dr. Robert Oppenheimer, president of the Institute for Advanced Study at Princeton. "Naturally," said Mrs. Roosevelt, "there can be only one subject we can deal with—and that must be the hydrogen bomb and the future

of the atomic energy program and its direct effect upon our future lives."

Said Dr. Oppenheimer, "The decision . . . to make or not to make the hydrogen bomb is rooted in complex technical things, but they touch the very basis of our morality. It is a grave danger for us that these decisions are taken on the basis of facts held secret."

Then the broadcast switched to Princeton, where Dr. Albert Einstein phrased the problem and offered one solution. " . . . Annihilation of any life on earth has been brought within the range of technical possibilities Is there any way out. . . ? Solemn renunciation of violence . . . is undoubtedly necessary. Such renunciation, however, can only be effective if . . . a supranational . . . body is set up. . . ."

But neither Dr. Einstein nor the others suggested how a world state can now be established. Later Dr. Bethe said, "Let us state . . . that we will never be the first to use hydrogen bombs." Senator McMahon repeated his proposal for a worldwide Marshall Plan. Then the program ended with the words of Mrs. Roosevelt: "May God grant us all the wisdom to find the true path to peace through cooperation with the other nations of the world."



EINSTEIN CALLS FOR WORLD STATE



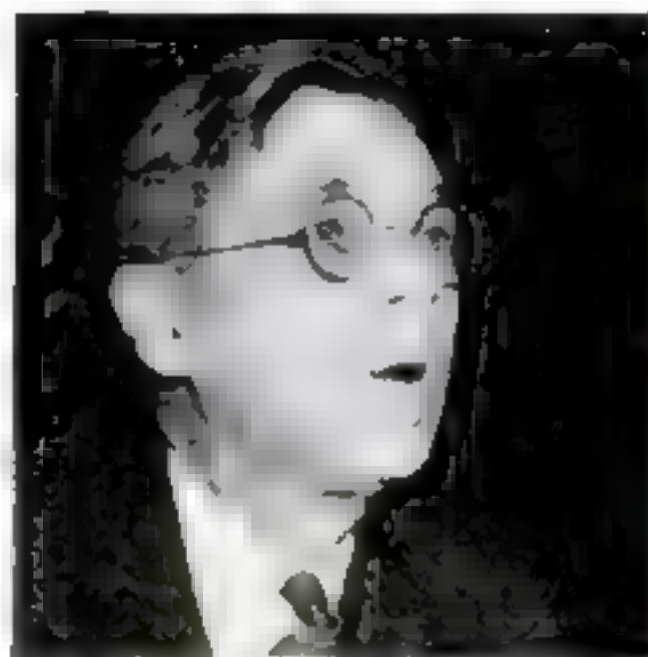
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like Gordon's*

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DRINKS NEVER TASTE THIN WITH GORDON'S GIN

100% NEUTRAL SPIRITS DISTILLED FROM GRAIN • GORDON'S DRY GIN CO., LTD., LINDEN, N. J.

Soul-Searchers CONTINUED

A GENERAL DEPLORES IGNORANCE AND A SCHOOLBOY SEES DEATH



DR. JAMES B. CONANT



GENERAL DWIGHT D. EISENHOWER

Elsewhere other American leaders found themselves in agreement with Dr. Robert Oppenheimer. General Dwight Eisenhower said, "I can't go along with those who believe we should hide the horror of the H-bomb in ignorance. I can see no good in ignorance. From the beginning of time, every invention of mankind has been capable of two uses, good and evil. It is up to the moral fiber of mankind to decide to which use an invention is put. But certainly at this time, faced as we are with a godless opponent, I do not believe we should bury our heads in the sand." Dr. James B. Conant, president of Harvard, was shocked because "the simple fact is that many important decisions are being made in Washington today without adequate evaluation."

But no matter what had surrounded the making of the decision, the fact remained that it had been made and reactions to it soon came from all over the world. Returning from Germany, U.S. Commissioner John J. McCloy said, "I am glad of President Truman's decision. If there were an oxygen bomb that would be bigger than the H-bomb, I would build it." In Rome the Vatican newspaper announced that "it is to be deplored of course that human society should have come to such a pass, and this is a sad commentary on the world's inability to insure peace except by force,"



JOHN J. McCLOY

but then went on to justify American manufacture of the bomb because of the "mysterious power" explosions in Russia. In Washington, Senator Millard Tydings said, "Our failure to build while other nations are building the H-bomb conceivably could . . . destroy our own security as well as dismember the democratic, liberty-loving world." In *Air Affairs* Bernard Baruch, whose proposal for international control of atomic energy has been blocked for almost four years by Russia in the U.N., wrote, "Every effort must be pressed to maintain our overwhelming advantage in the development of atomic weapons. Nor should any time be lost in proceeding to develop the best possible system of atomic civilian defense, as part of a general plan of mobilization readiness against the danger of possible war."

CONTINUED ON PAGE 48



BERNARD M. BARUCH



SENATOR MILLARD E. TYDINGS



Looking Ahead

...TO A GREAT CAREER!

*Your Life
as a
U.S. Air Force
Aviation
Cadet...*

**TRAINING
EDUCATION
RECREATION**



"263 CLEARED FOR TAKE-OFF!" It's great . . . the flight training you get in the famous "Texan" basic trainer. First with expert instructors, then solo . . . until you've mastered it! You're well on your way to becoming a U. S. Air Force officer and pilot!



LIFELONG FRIENDSHIPS! The finest fellows you've ever met are your companions at the best aviation schools in the world. And there's plenty of time for social activities, entertainment, sports. You'll find the facilities right on the post.



IT'S A POSTGRADUATE COURSE . . . with fascinating subjects. Aerodynamics, meteorology, navigation, radar! You get the finest aviation-executive background available in all the world! And, what's more, you draw pay while learning.



THERE'S A TRADITION AMONG PILOTS— you're dunked when you solo . . . but there's a formal graduation, too! When it's over, you'll be one of the proudest men in the world . . . for you wear the silver wings of a U. S. Air Force pilot.

*Then an
Important
Job
WITH
A GREAT
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NOW MANY INTERESTING ASSIGNMENTS are open to you. If you're a fighter pilot, you'll soon fly the new F-84 Thunderjet . . . or F-80 Shooting Star. As your ability increases, you advance from wing man to flight leader . . . move up in rank and pay!



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AIR TRANSPORT is a fast-growing field with an unlimited future. You get training and experience with heavy aircraft that can't be matched anywhere. As a U. S. Air Force officer, you help develop and perfect tomorrow's air transportation techniques.



TIME TO RELAX! You get thirty days' paid vacation every year. You'll find few other opportunities better than today's great opportunities in the United States Air Force. It's a young man's organization where you can go places fast. Investigate now! Top Aviation Cadet graduates receive Regular commissions immediately.

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If you are single, between the ages of 20 and 26½, with at least two years of college, this is your opportunity for U. S. Aviation Cadet training as pilot or navigator.

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BABY BEN ALARM



Quiet...as
a kitten on a rug!

BABY BEN has a quiet tick. His alarm calls loudly or softly, as you wish. He comes in a choice of two finishes—lustrous ivory, gold color trim; black with nickel. The smart little brother of Big Ben, he's a "chip off the old block" for dependability. \$4.75.



BIG BEN LOUD ALARM has "fire alarm" call, and a tick you can hear. In black finish. \$4.75.



BIG BEN CHIME ALARM, "first he whispers, then he shouts." Quiet tick. Ivory finish. \$5.75.



BIG BEN ELECTRIC ALARM has a pleasing bell alarm. With handsome brown case. \$8.95.

CLOCKS SHOWN COME WITH LUMINOUS DIALS AT ONE DOLLAR MORE

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Soul-Searchers CONTINUED



DR. VANNEVAR BUSH



DR. HAROLD C. UREY

But atomic defense was no easily solved problem. Dr. Vannevar Bush told the Senate Armed Services Committee, "The only way to defend yourself against any kind of bomb is to stop the airplane or carrier before it gets to the target, or to bomb the place that is manufacturing the bomb before it gets started. I know of no way to detonate an atomic bomb—or any other kind—once it is on its way." Dr. Harold C. Urey warned that atomic bombs in the holds of ships could easily be sneaked into the harbors of the U.S. or friendly nations, and there exploded or employed as the instruments of international extortion. Dr. Ralph Lapp, head of the Navy's nuclear research division, said, "Horrible as it may sound, we must be prepared to lose 10 to 15 million people in the first day of the superblitz. In a certain sense we are like the man who lives in a tar-paper shack and develops a flame thrower to protect himself."

Meanwhile the soul-searching of the leaders did not seem to upset the plain citizens of the nation. General Lucius D. Clay said, "So long as Americans are thinking about it, they will do the right thing." But there was evidence on every hand that many Americans were by no means ready to think about it. In Chicago a lawyer summed up one widely held attitude with, "I've ceased to even think about the prospect of war. The whole thing is so overwhelmingly depressing that I am glad I'm not running the government right now, that I can go about my own daily business." In Boston a business executive put it this way: "Maybe we're building up an immunity. The world keeps going from crisis to crisis, and they cry 'Wolf!' so often that we don't pay much attention to it." In Kansas City a cafe owner said, "The only people talking about war are those who stand to make some money out of it. The boys who were in the last war and the parents who lost sons don't want any part of it."



DR. RALPH LAPP

But in Los Angeles a 14-year-old schoolboy named Maitland Hardyman, asked by his teacher to write a short composition as an exercise in the use of words, did so. He lacked the facility of the scientists and the statesmen, and he used one horrible word 11 times while he was writing only 49. The word he used was the one that underlay the thinking of them all. The soul-searchers tidily tripped around it, but the schoolboy boldly picked it up and swung it like a sledge hammer. "The hydrogen bomb reeks with death. Death, death to thousands. A burning, searing death, a death that is horrible, lasting death. The most horrible death man has invented, the destroying, annihilating death of atomic energy. The poisoning, killing, destroying death. Death of the ages, of man. The lasting death."



GENERAL LUCIUS D. CLAY



MAITLAND HARDYMAN



yours to live with...

yours to love...

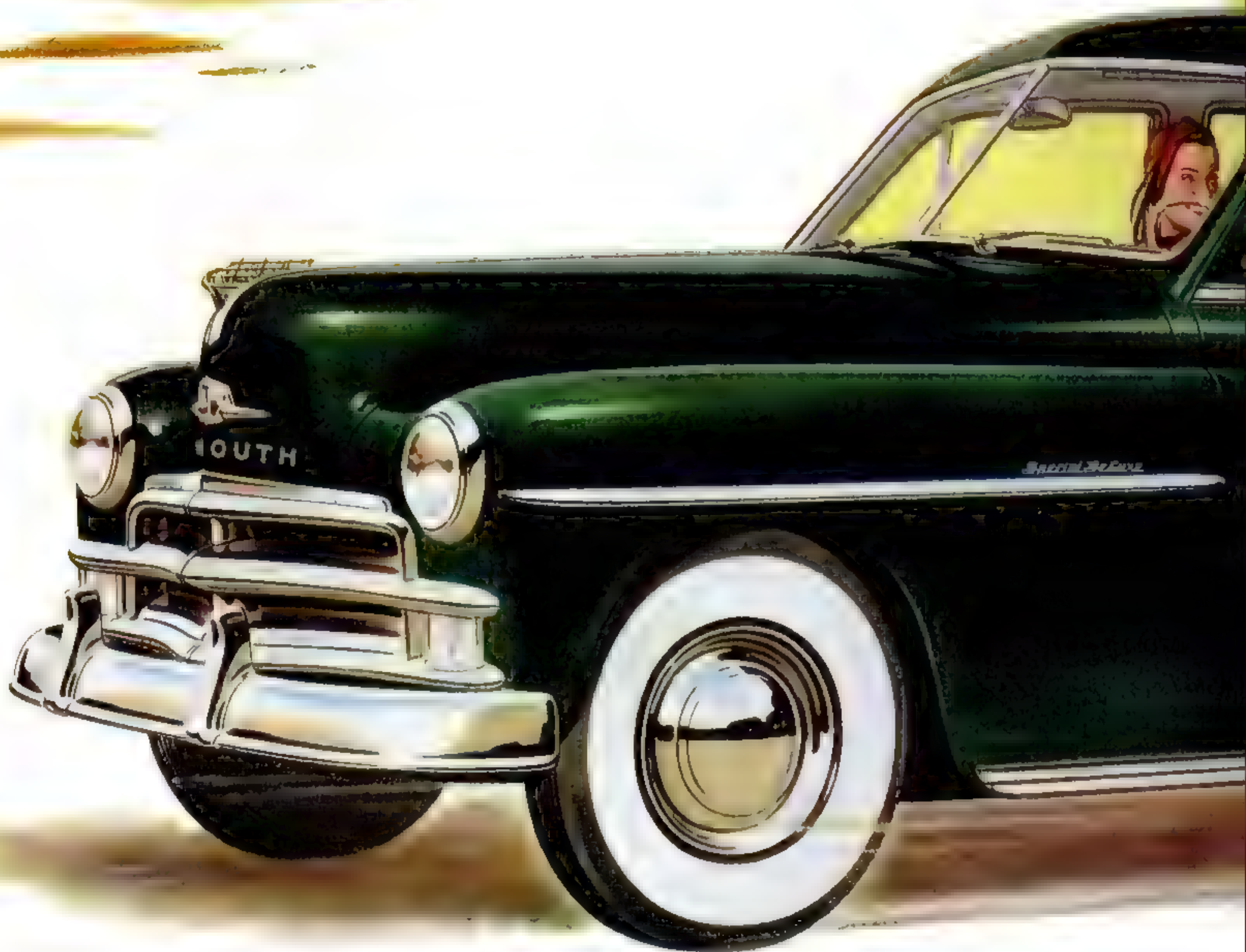
...for keeps

Community
• THE FINEST SILVERPLATE

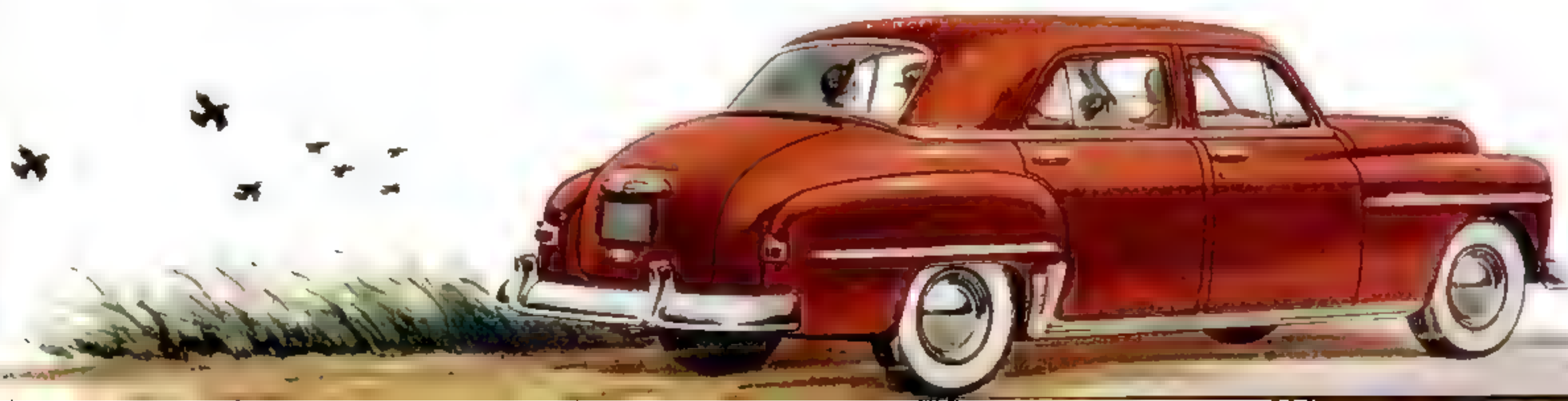
See your jeweler's new showing of five exciting patterns in the finest silverplate—Community. of course! Community for its enduring solid silver "Overlay." Community for its budget-thoughtful price (dinner services for eight start as low as \$19.75). No federal tax. And Community,* above all, for...

PATTERNS TO LIVE WITH . . . PATTERNS TO LOVE

NEW PLYMOUTH



NOW—more than ever—the car that likes to be compared!



*packed with value . . .
and ready to prove it!*



It's more dollar-for-dollar car than your money ever bought—and it's *ready to prove it*—this new American Beauty, this new, value-packed Plymouth!

See it at your nearby Plymouth dealer's now. But don't stop with just looking. Get in and drive this great new car. Let the brilliant new Plymouth show you what a whale of a lot of difference there is now in low-priced cars.

This distinctively styled car has the secure, solid "road set" of the heavy, high-priced limousine—yet it handles with amazing ease. And *nowhere else*—at Plymouth's low price—can you get the magic of Ignition Key starting . . . the mighty power of 7.0 to 1 compression ratio . . . the swift, smooth stops of Safe-Guard Hydraulic Brakes . . . the added, positive protection of Safety-

Rim Wheels, and many other basic engineering advantages.

Before you buy—let comparison be your guide! Let the great new Plymouth show you more safety, comfort, economy and performance than you can get in any other low-priced car. See your nearby Plymouth dealer now for a demonstration drive.

PLYMOUTH Division of CHRYSLER CORPORATION, Detroit 31, Mich.

SEE THIS NEW AMERICAN BEAUTY AT YOUR PLYMOUTH DEALER'S NOW



SPECIAL!
Evening in Paris

Purse Companions

Exciting \$1.50 Value—NOW \$1.00
plus tax



Evening in Paris

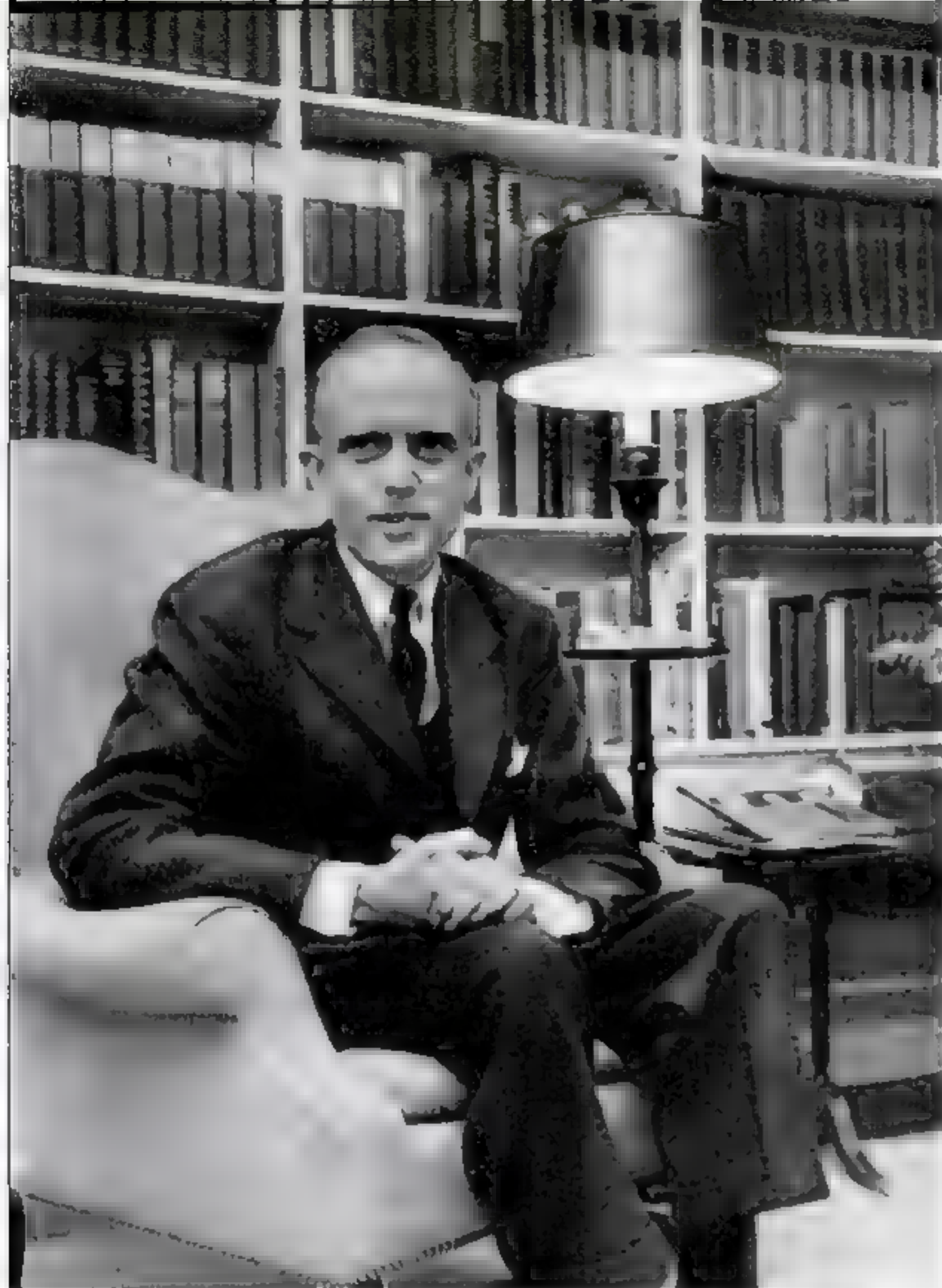
Purse Flacon of Perfume *plus*
famous Evening in Paris Lipstick

You'll wait a long, long time before you see another value like this!

The world's best-beloved Perfume—EVENING in PARIS—plus the Lipstick that echoes its romantic fragrance—together in a *stunning* Purse Companions package! Your choice of four fashion-right EVENING in PARIS Lipstick shades: Happy Medium, Truly Brilliant, Fiery Dark, Rose Pompon.

So hurry, *hurry* to your cosmetic counter—you'll want EVENING in PARIS Purse Companions with you today — every day, everywhere you go!

by BOURJOIS



NEW PRESIDENT ALFRED WHITNEY GRISWOLD WILL TAKE OFFICE NEXT JULY



RETIRING PRESIDENT CHARLES SEYMOUR SITS BEFORE PORTRAIT OF ELIHU YALE

YALE GETS A NEW PRESIDENT

Last week was a momentous one for the Ivy League: Yale University got a new president. Ever since April, when outgoing President Charles Seymour announced his retirement, the entire academic world had been guessing at his successor, sifting through the ranks of likely Yale men in business, politics and law and even speculating about ambassadors and the Secretary of State. The announcement fooled most of them. The new president of Yale is an earnest, popular professor named Alfred Whitney Griswold, who teaches Yale's "History 36" (U.S. Political Philosophy). At 43 he is president of the third oldest U.S. university.

President Griswold comes from an old Connecticut family—six of his ancestors were colonial governors of the state. As a frisky undergraduate in the class of '29 he wrote for the *Yale Daily News* and was managing editor of the *Record*, the college humor magazine. In the latter he analyzed Harvard men (they can be distinguished from Yale men by their short haircuts), Smith and Vassar girls (they look their best at a masked ball) and Princeton men (one roller skated from Princeton to Morristown, thereby putting both towns on the map). His contemporaries elected him the "wittiest" and "most original" member of the class. A few months after graduating he came back to Yale to teach and has been there ever since, serving also as a director of the Army's Specialized Training Program in the war. In 1938 he wrote the authoritative *The Far Eastern Policy of the United States*.

The man he succeeds is a Yale man from an old Yale family. Seymour's great-great-grandfather and a great-uncle were both Yale presidents and his father was a Yale professor. Seymour himself was born in New Haven in 1885, was a member of the class of '08 and started teaching at the university in 1911. In between his years at Yale he made a brilliant name for himself as an

adviser to Woodrow Wilson at the Paris Peace Conference and as editor of the personal papers of Colonel House. His term at Yale was not an easy one. He took over the presidency in 1937 at the end of the depression and guided the university during the war and afterwards, when its enrolment swelled from 5,300 to an unwieldy 9,000.

A few days before the announcement of his successor, while the Yale Corporation was still making its final choice, the editors of the *Yale Daily News* gave a party to bid their president goodbye. To their dinner came an illustrious assortment of Ivy League presidents (*next page*)—Conant of Harvard, Stassen of Pennsylvania, Eisenhower of Columbia, Dodds of Princeton, Killian of M.I.T. Most of them, already overfamiliar with the problem of fund-raising which will now confront Griswold, envied the step Seymour was taking. As President Killian wistfully put it, "He will enter that blessed state where there are no unbalanceable budgets . . . where the college newspaper is always provocative but never provoking . . . where students are all scholars . . . and where scholars are all satisfied with their pay checks."



GRISWOLD FAMILY consists of Molly, 14 (standing), Whitney Jr., 5, Mrs. Griswold and Susy, 10. Sally, 17, is away at school.



A joy to have around
Handiest cleaner in America...

HOOVER
MODEL 115

\$49.95
only and your old cleaner

Prices slightly higher in Canada

Lady, what a cleaner! Big enough for tough jobs, light enough for quick ones, handy enough to store in "pint-size" space. So easy to handle, so quick to whisk away surface litter, so thorough at getting the deep-down dirt with Hoover's exclusive Triple-Action principle—it beats, as it sweeps, as it cleans.

ONLY \$5.00 DOWN! Hoover Model 115 is yours for only \$49.95 and your old cleaner! Easy monthly payments. (Cleaning tools available at slight extra cost.)

Look in your classified telephone directory for the name of your nearest Hoover dealer, and call him for a home showing without obligation. Four great Hoovers to choose from—three fine Triple-Action models and Hoover's new Tank Cleaner. Call now!

THE HOOVER COMPANY
North Canton, Ohio; Hamilton, Ontario, Canada;
Pottsville, England

*You'll be happier
with a Hoover*



Yale's New President CONTINUED



COLUMBIA'S PRESIDENT Eliot A. Rosenzweig told guests Seymour made him proud to be a college president.



PENN'S PRESIDENT Seymour delivered a poem he wrote, which begins: "Here's a toast to Charles Seymour."



HARVARD'S PRESIDENT Conant said rivalry between Harvard and Yale had always been friendly. Then, turning to Seymour (left), he said, "We admire you. We envy your record, wish you much happiness in the years to come."



PRINCETON President Dodds told guests that Seymour had made Yale a true community of life and learning.



M.I.T. President Killian said that Seymour had provided college presidents with shining goals to follow.

THEY'RE

femineered!

The NEW 1950

INTERNATIONAL HARVESTER

Refrigerators



WOMEN DREAMED THEM...

HOME ECONOMISTS PLANNED THEM

You not only dreamed them—you actually created them! Because *your* needs inspired these new, improved, feature-full International Harvester Refrigerators. Because of *you*, experienced IH home economists planned with a purpose—to give *you* the space, storage and service *you've* dreamed of!

Your IH dealer will show you all *four femineered* new 1950 models—each with its own *special* utility features. And *every feature has a function!* No frills, no gadgets, no dust catchers. Every inch on active duty! Look for the bigger bottle areas... extra shelf space... flexible shelf arrangements... cold clear to the floor... plus the exclusive features shown below! *All* models have the economy "Tight-Wad" refrigerating unit with its 5-year warranty *permanently* attached to the cabinet.

See these spacious kitchen-wonders—they're thrift-investments! Built of the finest materials money can buy, every inch a work of art... to last, to serve, to save for you.

FEMINEERED FROM TOP TO BOTTOM

Yes! *Femineered* to fit into *every* apartment, home, or farm-kitchen... giving added food space without taking extra floor space. Be sure to see these new 1950 International Harvester Refrigerators—*femineered* for you!

Tune in James Melton and "Harvest of Stars" now on NBC, Sunday afternoons.

Model H-84
8 4 cubic foot capacity
Other models
7.4 to 9.5 cubic foot capacity



EVERY FEATURE HAS A FUNCTION



Exclusive! Bottle-Opener. Permanently built-in on door latch. Always handy, easy-working, saves time, trouble. Can't be misplaced. *IH femineered!*



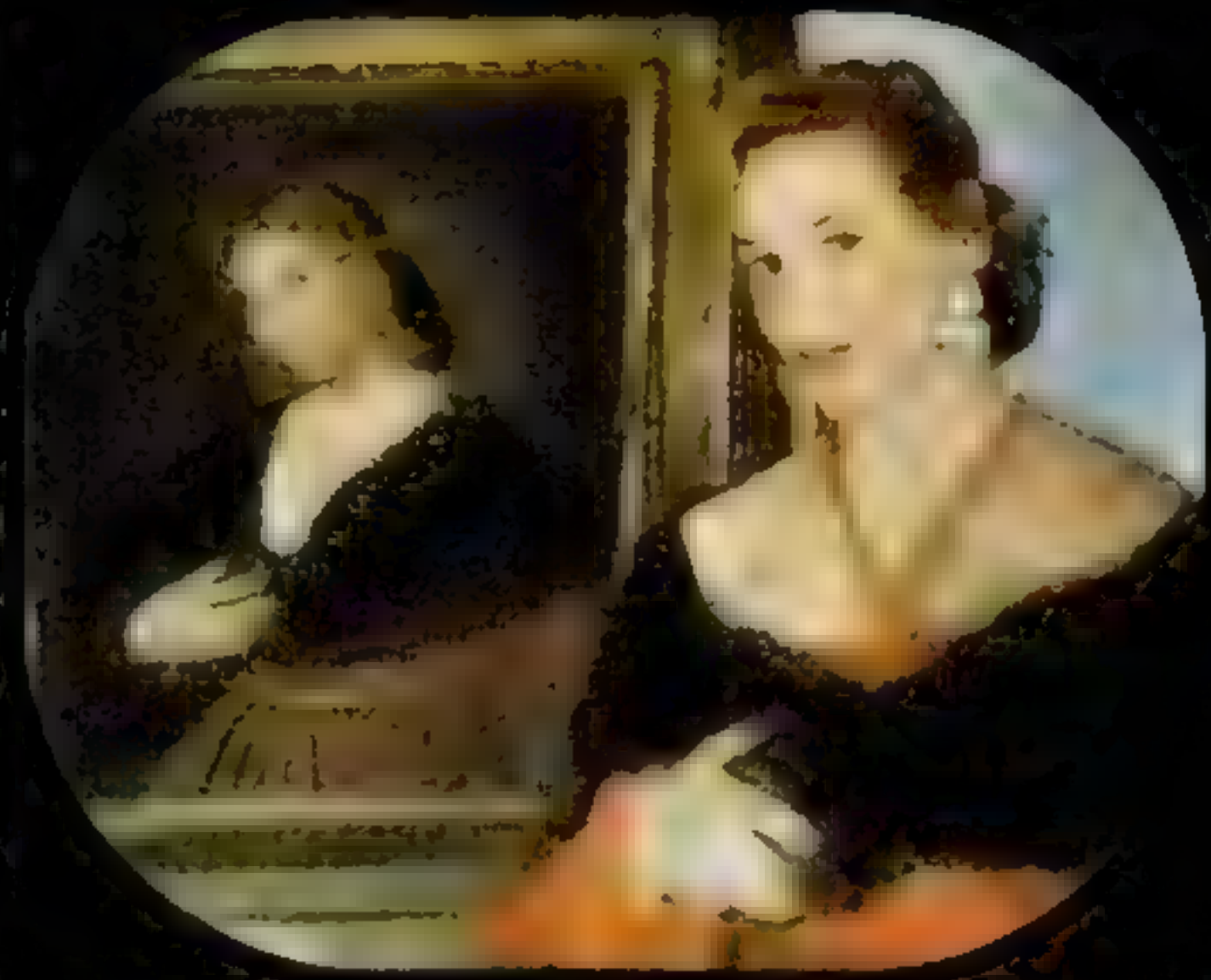
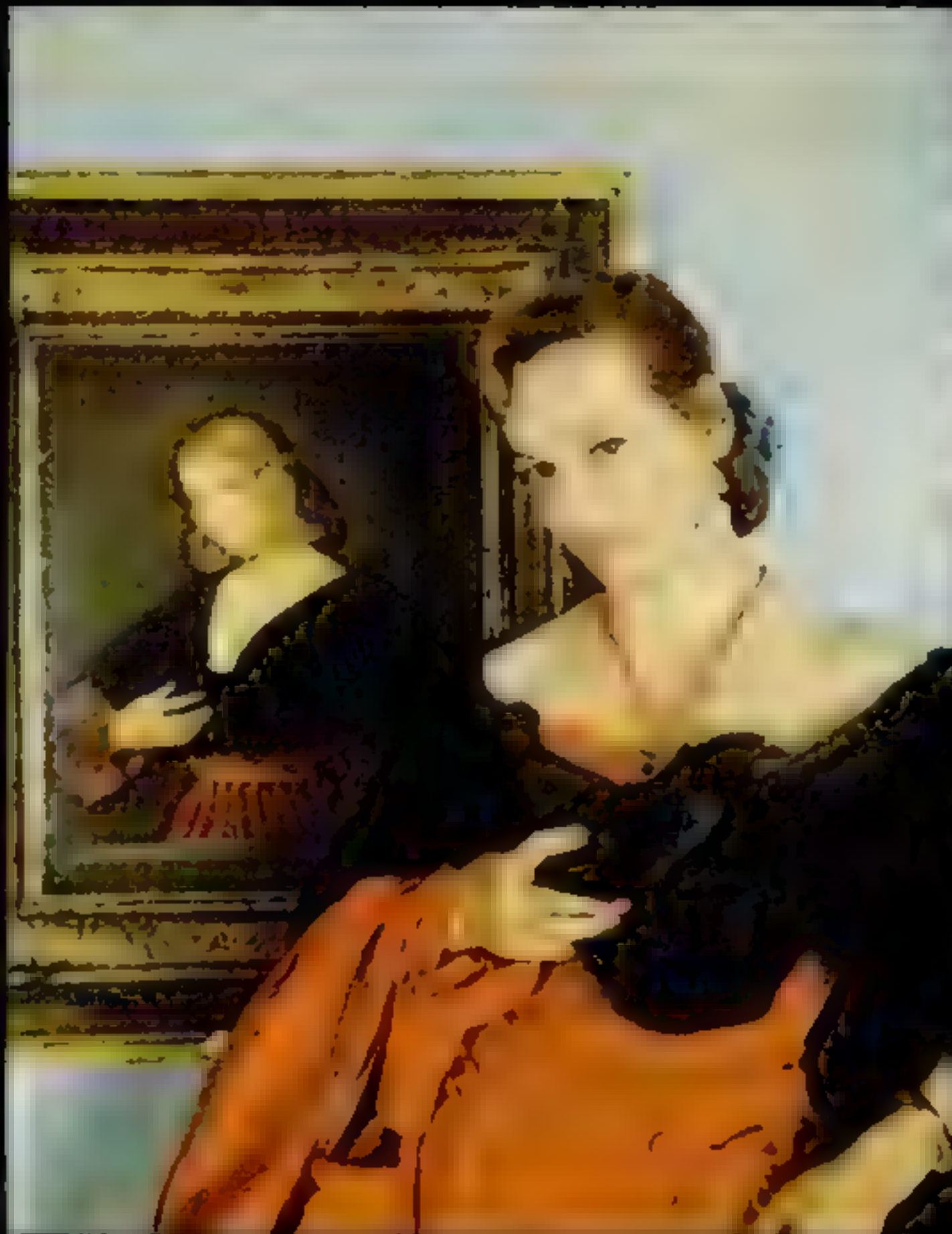
Exclusive! "Egg-O-Mat." Stores 16 eggs safely, up and out of the way. Dispenses one or two eggs at a time. Prevents breakage. *IH femineered!*



Exclusive! "Diffuse-O-Lite." Floods light throughout interior. Spotlights "Easy-Do" temperature control, makes it easy to read. *IH femineered!*

Exclusive! "Shadowline" Styling. Tapered perfection inside and out. Easy to clean, lovely to look at. *IH femineered!*

International Harvester Also Builds McCormick Farm Equipment and Farmall Tractors... Motor Trucks... Industrial Power • International Harvester Company, 180 North Michigan Avenue, Chicago 1, Illinois



CBS COLOR TELEVISION

The picture above—showing Actress *Lucy Liu* in costume before an old master in Washington's National Gallery—was taken by *Lia* as it looked on a CBS color television screen. At left, for comparison, is a photograph of the actual scene taken under studio lighting conditions with color by *Lia*. CBS color television equipment is actually portable, and the more intensely interesting the scene, the more color is shown. Not CBS color telecasts can be received in the present existing sets. But with relatively minor additions the sets will receive color on a black and white



RCA COLOR TELEVISION

The picture above, of a woman in costume, is for a pretty enquirer, was photographed from an RCA television screen during the recent TV color tests held privately in Washington, D.C. At left are the actual performers taken by *Lia* as photographed in the TV studio. RCA color pictures at present are more blurry and variable than CBS's, but RCA engineers say their system is still under development and that these defects can be corrected. RCA color telecasts can be received on black and white on existing sets. Bulky converters would be required for color reception.

TV COLOR CONTROVERSY

FCC hearings in Washington will judge rival systems and try to thaw out television's long freeze

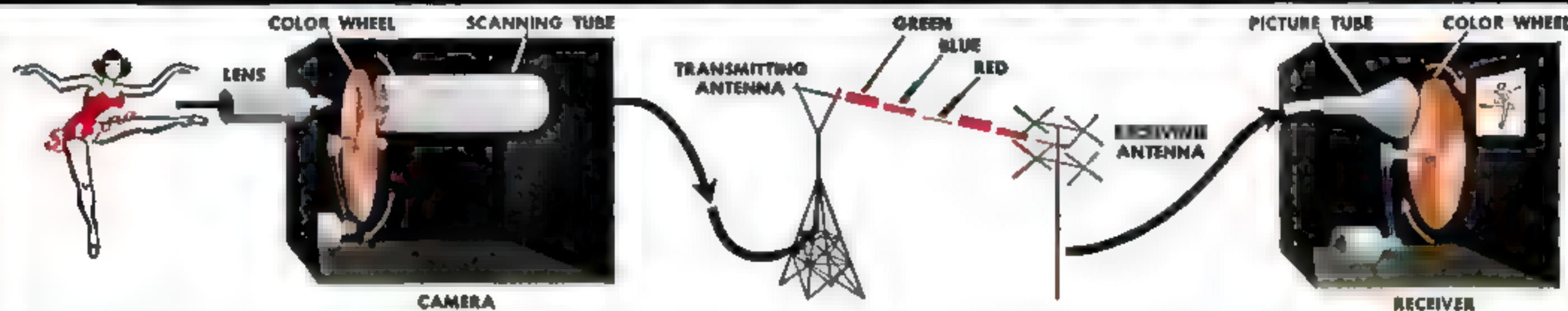
Next week Washington's Federal Communications Commission will resume the stormy hearings which it began last fall and will decide whether color TV is ripe for the U.S. public. As a traffic cop, assigning "channels" for nationwide civilian and military radio communications, the FCC has to set engineering standards for all television including color. Until these related problems of channeling and engineering can be licked, the FCC has declared a freeze on TV and is withholding permits on new stations. Therefore, upon the FCC hearings depends not

only the immediate future of color TV, but the progress of television itself.

Last fall the two big rivals in TV's color rum-pus were CBS and RCA. Each had evolved its own individual system. Last month both companies were showing their systems in Washington, where LIFE took the pictures on opposite page. Meanwhile, as a sort of dark horse, a third system of transmission, called Color Television, Inc., has just given its first official demonstration and will also be discussed at the hearings.

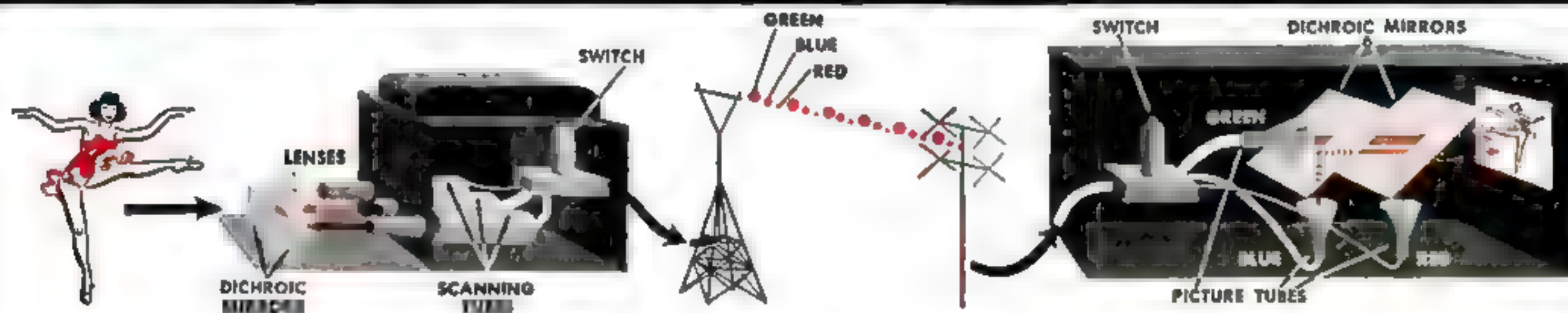
Below are diagrams showing the three main

systems of color television. CBS, which has a workable system now, wants to start telecasting right away. RCA, which insists that its system is potentially more workable than CBS's, could profit by delay. One solution to the color problem, subject to the objection that it may cause TV set owners more expense, is to grant temporary licenses to one or more of the three existing systems. The indications are that this may be FCC's decision. But whatever decision is made, most observers feel FCC should end its freeze so existing TV facilities can be expanded.



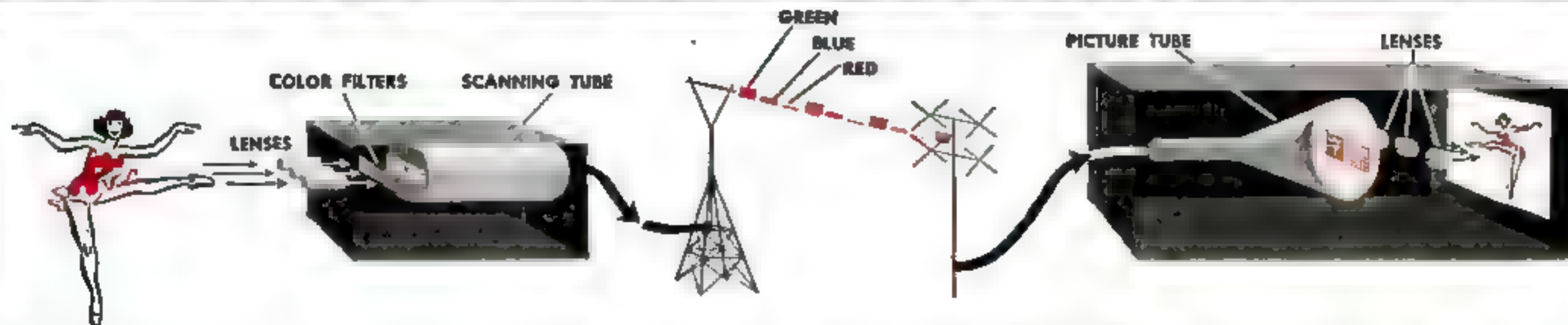
CBS EQUIPMENT employs wheel which rotates behind camera lens and separates the three basic colors of the image. Wheel's red, green and blue segments filter the light from subject so the colors pass through in succession. As in all TV, scanning tube changes lens image into electric signals which are broadcast. In

receiver, picture tube forms images in black and white, but a second color wheel synchronized with the first transforms images back to their original color (as "green" image is formed, green segment of wheel passes over tube, etc.). Succession of images seen through wheel appears to the eye as a single color picture.



RCA EQUIPMENT directs red, green and blue light from the subject into separate lenses by means of a series of "dichroic" mirrors, each of which reflects only one color into the lens of the camera. Individual scanning tubes then translate the three lens images into broadcast signals. An electronic switching device allows

the tubes to send their signals in rotation. In the RCA receiver these signals are sorted by a second switching device and sent in the proper order to red, green and blue picture tubes. The resulting colored images are reflected by more dichroic mirrors into the same viewing plane to produce the final full-color picture.



CTI EQUIPMENT has three camera lenses focused on the subject. Behind the lenses are mounted three color filters which produce red, green and blue images side by side on a single scanning tube. This triple image is transmitted over the air as a single picture. In CTI receiver this three-in-one composite image is re-

ceived on three separate areas on the face of the picture tube. These areas are treated with different phosphorescent compounds which glow in red, green or blue. Lenses between the tube and the viewing screen project the single color images onto the same spot, focusing them into one single multicolored picture.

CORONET

brandy



America's
largest-selling brandy...
makes the lighter highball

makes your
favorite cocktail!

Brandy Dist. Corp., 350 Fifth Ave., N. Y. 1, N. Y. California Grape Brandy 84 Proof.

© 1950 BRANDY DISTILLERS CORP.

Write for Coronet's free recipe booklet, "29 ways to use Coronet V.S.O."

Color TV CONTINUED

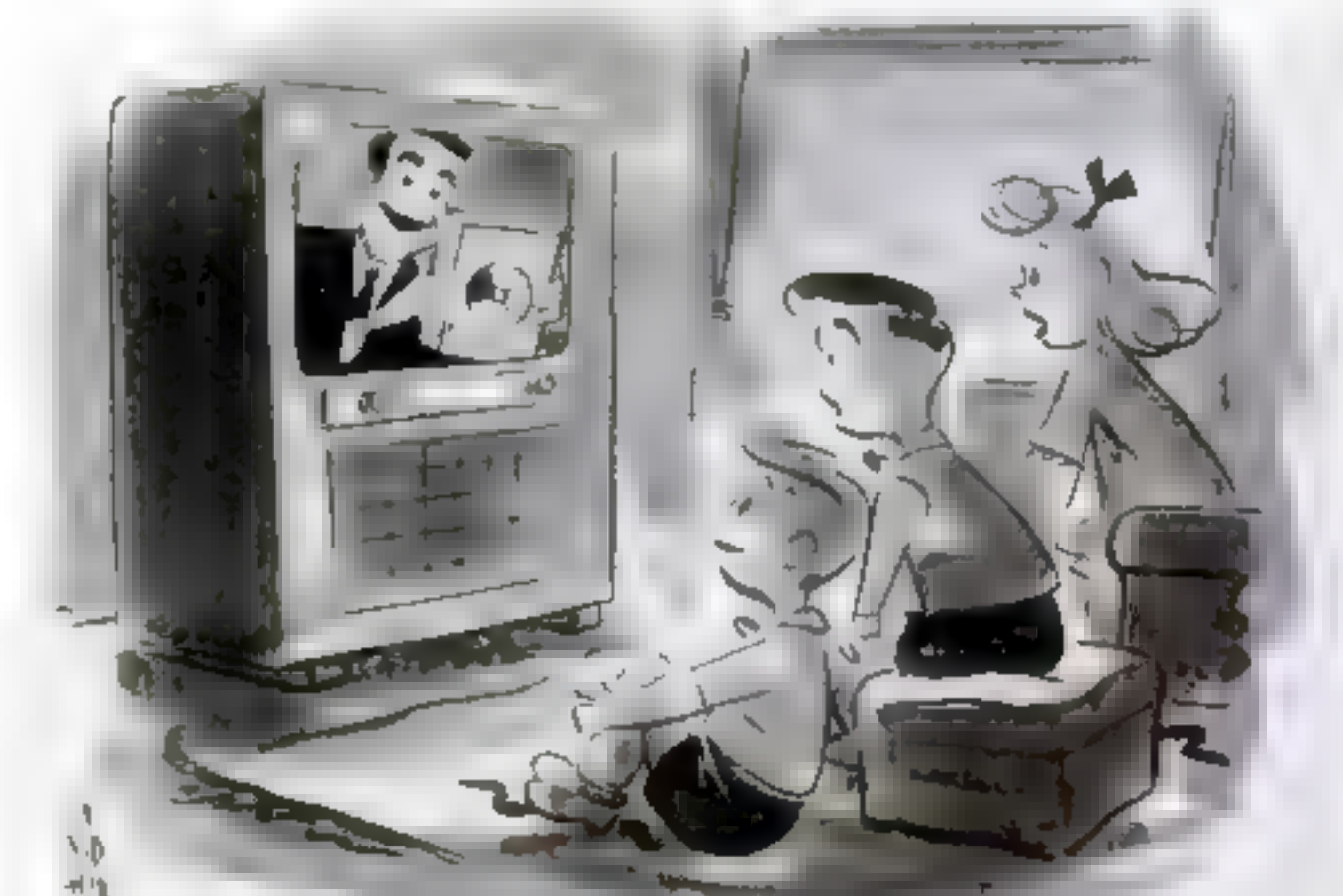
KILLY GETS COLOR TV FOR 30¢



HOMEMADE COLOR TV was achieved by Forrest Kilby of Roselle, N.J., who built wheel with segments of red, green and blue cellophane based on CBS's designs. With phonograph motor, he rigged up wheel to spin. Total cost: 30¢.



CBS COLOR TELECAST is received in black and white on an adapted television set. But it appears in full color when seen through Kilby's spinning wheel. Says Kilby, "Anyone can do it." CBS says it proves advantage of its system.



"REMEMBER, KIDDIES, there's a TV color converter on every package of Crispy, Crackly Breakfast Munchies!" Cartoon from *Broadcasting-Telecasting* spoofs Kilby's wheel, which has now been built by many home inventors.

No earth-shattering medical claims—

Old Gold cures just one thing:
The World's Best Tobacco!



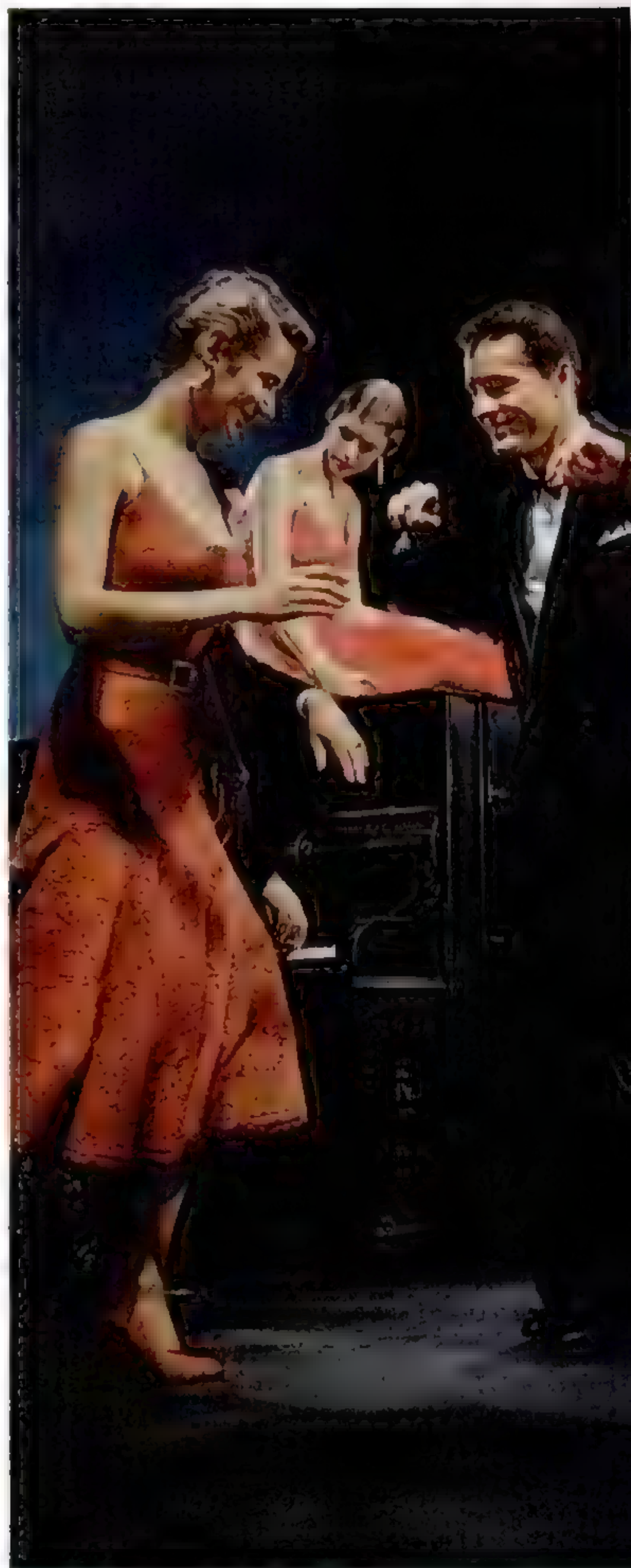
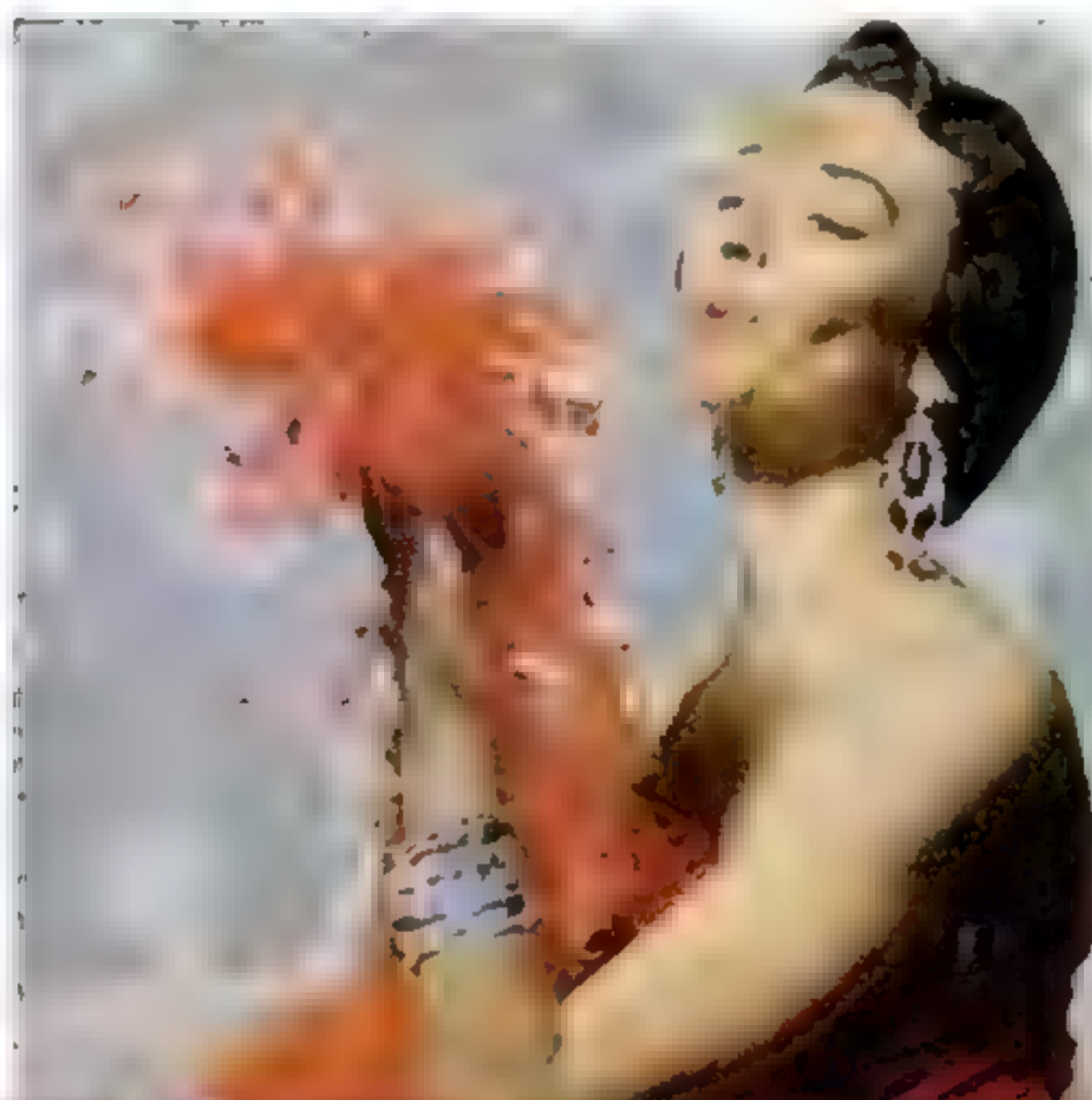


RED-ALL-OVER LOOK is carried out by rhinestone-trimmed pumps (Delman, \$42.95) above and, in picture at right, by dyed satin sandals (Julianelli, \$24.95).

The Little Red Dress

IT MAY PROVE THE '50s' FIRST FASHION CLASSIC

The turn of the half-century has been brightened by a rash of short red evening dresses. "The little red dress" may be lace, crepe or chiffon, costs from \$25 to \$450. Designers feel it may take its place beside the "good little black" cocktail dress as a similar, if more specialized, fashion classic. The inconspicuous black dress covered a multitude of figure problems, was worn like a uniform with standard accessories (pearls, opera pumps, white gloves). The red dress, definitely conspicuous, is developing its own requirements. The wearer must have a good figure, a sleek hairdo, matching shoes, and the dress itself must have simple lines to allow a solid concentration of color. This is set off by an emphatic splash of rhinestones.



← **FLASHY LOOK** is given a red dress by large pieces of rhinestone jewelry, if its wearer does not own enough diamonds. The earrings are three inches long, cost \$25, the bracelets range from \$15 to \$30, and all of them come from Hatue Carnegie.



THE NEW DRESSES have simple lines and short skirts which excellently lend themselves to the leg movements of the newly revived Charleston. In this picture shows, dancers in foreground are gyrating in (left to right) flounced red

lace (Traina Norell, \$150), crepe with black beading (Diminutives, \$90), scarf-skirted chiffon (Young Hollywood, \$75). In the background appear chiffon with leathers (Miss America, \$90) and pink-to-red shaded fringe (Omar Khan, \$250).



Sweet Dreams

The candy with the hole

only 5¢





CHIEF TOPIC OF CONVERSATION IN GAS STATION IS PROBLEMS CAUSED BY BOOM. ATTENDANT JOKINGLY TELLS CUSTOMERS HE SELLS OIL ONLY BY THE BARREL

A SHARE-THE-OIL PLAN IN INDIANA

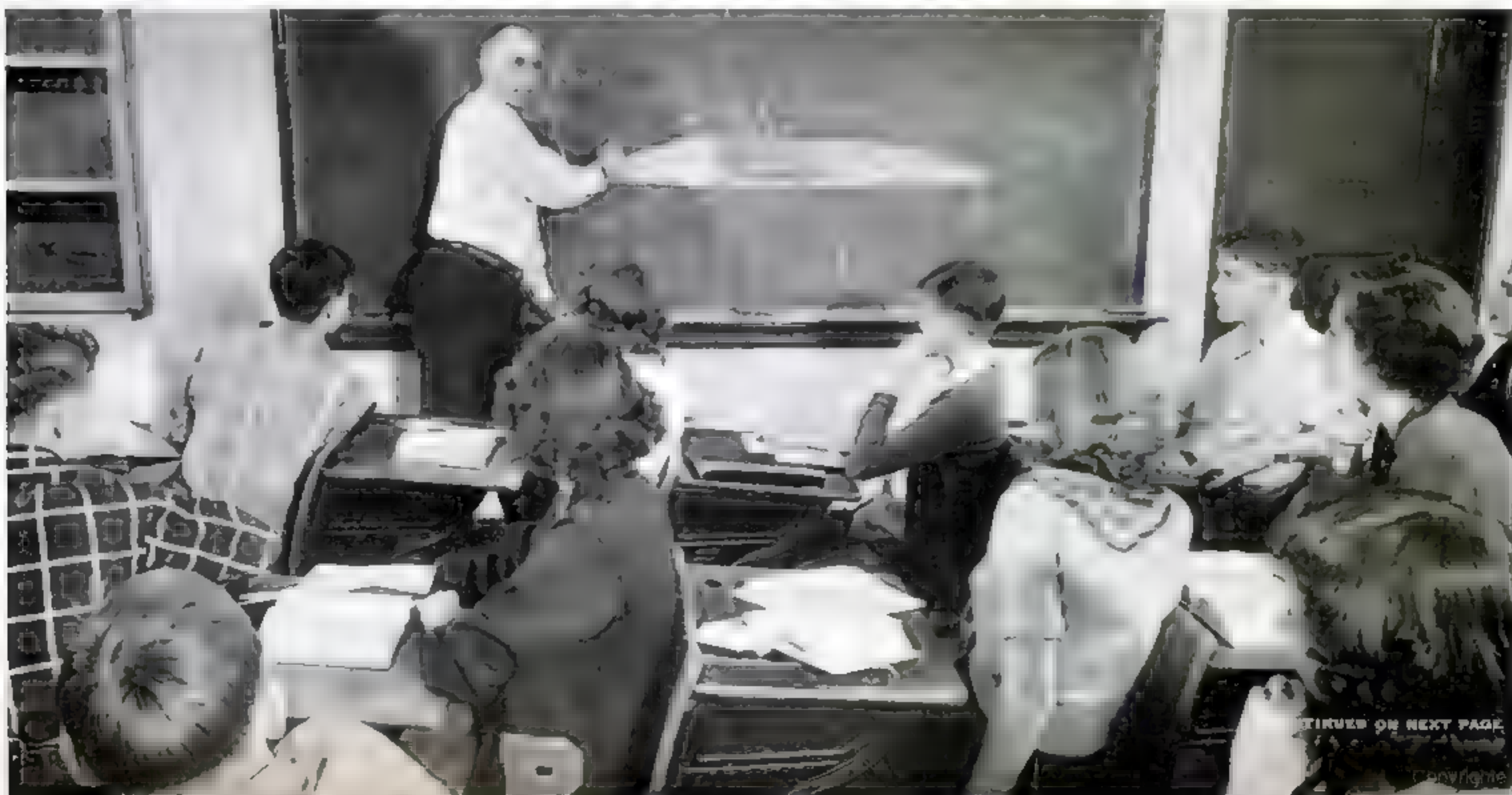
Attempt to divide money hits snag

When a crew of drillers in Plainville, Ind. struck oil on the postmaster's vacant lot early this month the town's 619 citizens got set for a boom. But the laws of the state raised some problems which went beyond what to do with the royalties. It was illegal for instance to drill more than one well to every 10 acres, and the statutes also provided that anyone who hit oil had to share his income with other landowners in the same 10-acre plot. Plainville's 280 property owners decided everybody might do better if rights to the whole town were pooled and the income divided according to the amount of

land each owner held. The town was divided into two sections—east and west—and the work of obtaining "communitization" agreements began.

There was one catch: the agreements had to be signed by every property holder. On the west side, where the town's only well was bringing in 360 barrels a day, the town blacksmith, Louis Heithecker, held out. He thought that everyone in Plainville should share in the royalties whether he owned land or not. Last week the east side, where wells were just being drilled, had its agreement but no oil. The west side had its well but no agreement.

HIGH SCHOOL CLASS LEARNS WHERE OIL COMES FROM IN ILLUSTRATED LESSON BY MATH TEACHER CLINTON DOUGHERTY, WHO IS ALSO PLAINVILLE'S TOWN CLERK



CONTINUED ON NEXT PAGE

Copyright



"Wouldn't you know
Scott would make it
so much better?"

You'd expect Scott to make
the finest bathroom tissue and
that's just what their Soft-Weve
is! So very soft—so very firm
... A really practical, yet
luxurious tissue!

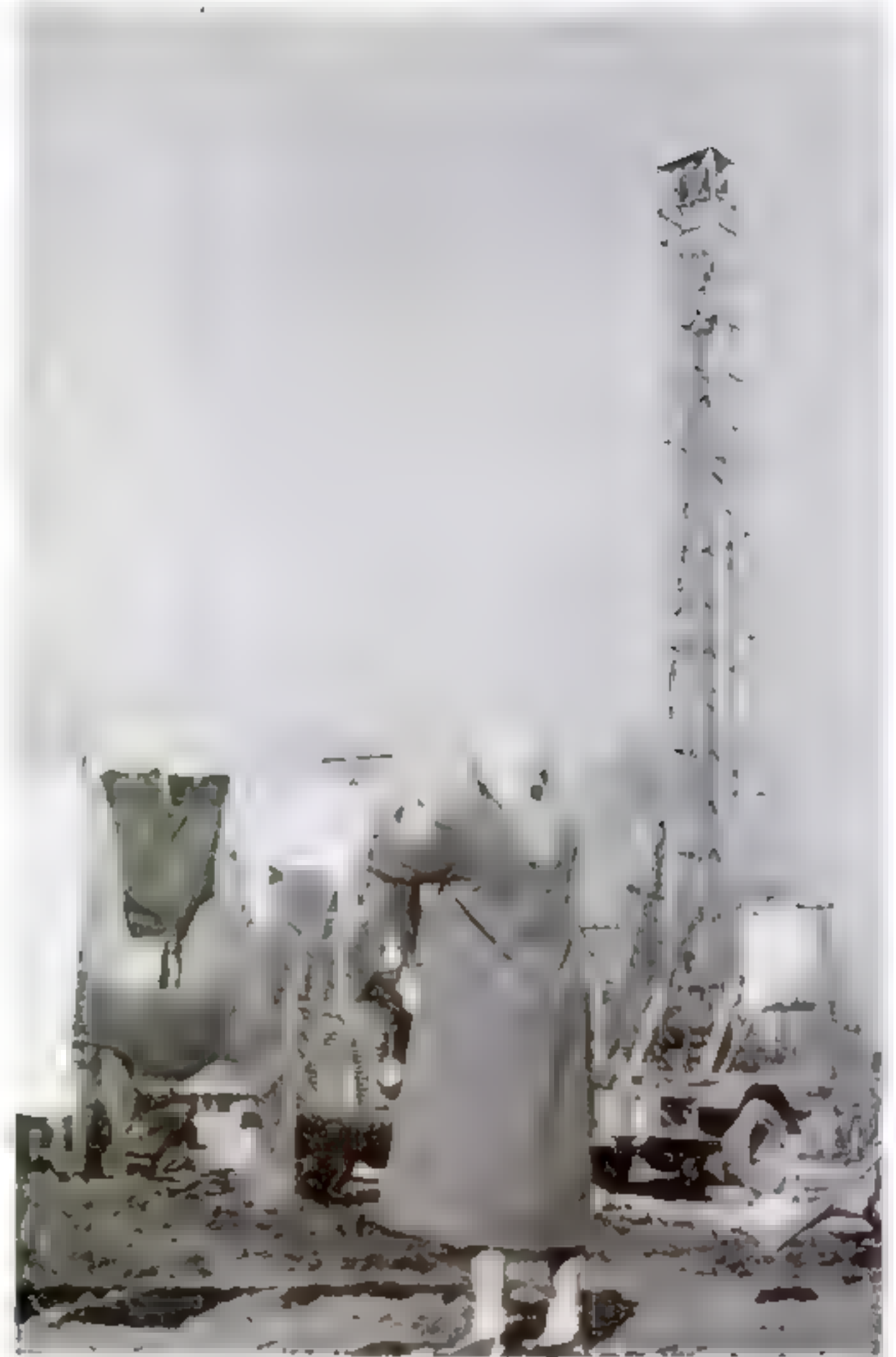


It's softer... stronger, too!
— It's Double

"Soft-Weve" "Scotties" "soft as old linen" Reg. U. S. Pat. Off.



* another tissue by **Scott** that's "soft as old linen"



HANGING CLOTHES, Mrs. John Mayhugh watches workmen drilling for oil on her neighbor's property. The noise keeps her 11-month-old baby awake.



FINGERING OIL that came from well drilled on his vacant lot, Postmaster Roy Strange says he is in favor of splitting with the other landowners.

CONTINUED ON PAGE 32

There's a Better Way to Wash

...THE 1950 THOR WAY!

from suds
to spin-dry
in a single
porcelain tub



Thor

Automagic
SPINNER-WASHER

• Your hands are never in water
... everything done in one tub. You never
touch clothes until ready for the line.

• No lifting... No tired back... saves
wear and tear on clothes... on you.

• Fingertip control... no hard work—
the THOR does it all while you relax!



THOR Agitator Washing—Gentle, fast, gets soiled clothes really
clean—world's finest washing.

THOR Single Tub Spinner—Gets out 25% more water than wring-
ers—no squashed clothes.

THOR Overflow Rinse—With agitator action and completely flex-
ible timing. The world's finest rinsing.

The great 1950 value
is the great 1950 THOR Automagic
No bolting down... no plumbing
installation necessary

\$199⁵⁰

See the New 1950
THOR WAY DEMONSTRATION
of Better Washing at Your Dealer's.

THOR CORPORATION • Chicago 50, Illinois Thor-Canadian Company, Ltd., Toronto, Canada

*REG. U. S. PAT. OFF.

TOM, DICK AND HARRY



TOM C. CALVIN, St. Louis salesman, says, "Calvert's better taste switched me to Calvert for keeps!"



RICHARD B. RAY, Los Angeles service station owner, says, "Calvert's a milder, smoother, mellower drink!"



HARRY L. DE ZIEL is a Minneapolis, Minn., contractor and a moderate man. "Calvert is lighter and milder," he says.

BOB, BERT AND LARRY



ROBERT HEIGER, salesman of Essex, Md., declares, "Calvert's better taste always makes it a better buy."



ALBERT ERLE, Oakland, Cal., salesman, is switching his friends to Calvert, too. "One drink sells Calvert for keeps!"



LARRY VINCENT, songwriter of Covington, Ky., gets lyrical about Calvert. "Smooth, mellow, flavorful!" he says.

RALPH, LOU AND BARRY



R. H. VANDENBERG, Cincinnati, Ohio foreman, says, "Calvert is tops in taste and therefore tops in value!"



LOUIS H. BALL, photo shop owner of Milwaukee, Wis., says, "Calvert is richer in flavor, finer in a highball!"



BARRY STEPHENS, New York artist representative, agrees that Calvert is "today's best whiskey buy!"

Whatever the name —
the choice is the same

It's
Smart to Switch to
Calvert

Lighter... Smoother... Tastes Better

BLENDING WHISKEY, 86 & PROOF, 65% GRAIN NEUTRAL SPIRITS. CALVERT DISTILLERS CORP., N. Y. C.



Oil CONTINUED



BUSY MINISTER, the Rev. Thomas Avery (at right, top), discusses community papers with town banker, Charles England, who approves his asking Plainville real estate owners to share their royalties. Below: Rev. Mr. Avery gets Church Janitor Harlen Hutchens and his wife to sign the agreement.



ON MAIN STREET an oil derrick lies across the sidewalk after drilling hole. A telephone lineman is kept busy replacing wires torn down by the oil crews.

Jarman offers you a choice of
Smarter Styles in your Correct Size

you're assured Jarman's famous "friendliness of fit"



If your size is checked Jarman has it!

	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	13	14	15
AAAA																		
AAA																		
AA																		
A																		
B																		
C																		
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All three Jarman styles shown above are available in the 153 different sizes checked on this chart.

LEFT: Style 4189. Rich genuine calfskin in a classic straight tip, custom toe box.

CENTER: Style 4798. Handsome moccasin blucher. Hand-rolled leather sole, de luxe rubber heel.

RIGHT: Style 5134. Smart, neatly stitched, straight tip box in genuine calfskin.

If your size is from 5 to 15 your Jarman dealer can correctly fit you in the three handsome styles shown above. Jarman designed these and a wide selection of other smart new patterns for spring to offer you a fitting choice. And to assure lasting comfort, every pair gives you top quality, beautifully finished leathers—plus Jarman's famous *friendliness of fit*, the foot-snugging comfort that's yours the instant your foot slips into a Jarman shoe. No wonder, season after season, more and more men *look smarter* and *feel better* in Jarman's. To enjoy more miles of walking pleasure, to be easily and expertly fitted in the style of your choice, see your Jarman dealer, today!

JARMAN SHOE COMPANY, NASHVILLE, TENN.  DIV. OF GENERAL SHOE CORPORATION

Now **Post** **BR** **GUARANTEED**



They **LOOK** Fresh!

Golden-brown flakes so bright and perky . . . just to see them is to know they're fresh!



They **FEEL** Fresh!

They've got to be fresh to be so **CRISP** . . . and they're so delicate they melt in your mouth!



They **TASTE** Fresh!

Mmmm! It's unmistakable . . . that certain mouth-watering flavor that always goes with freshness!



SURE TEST for Freshness!

Run your thumbnail across a Post package. That little curl of wax—just like the paraffin you use to seal in the freshness of your homemade preserves—is a sure sign the cereal inside is **FRESH!**



Post TOAST Corn

Brings You Cereals KEPT FRESH!

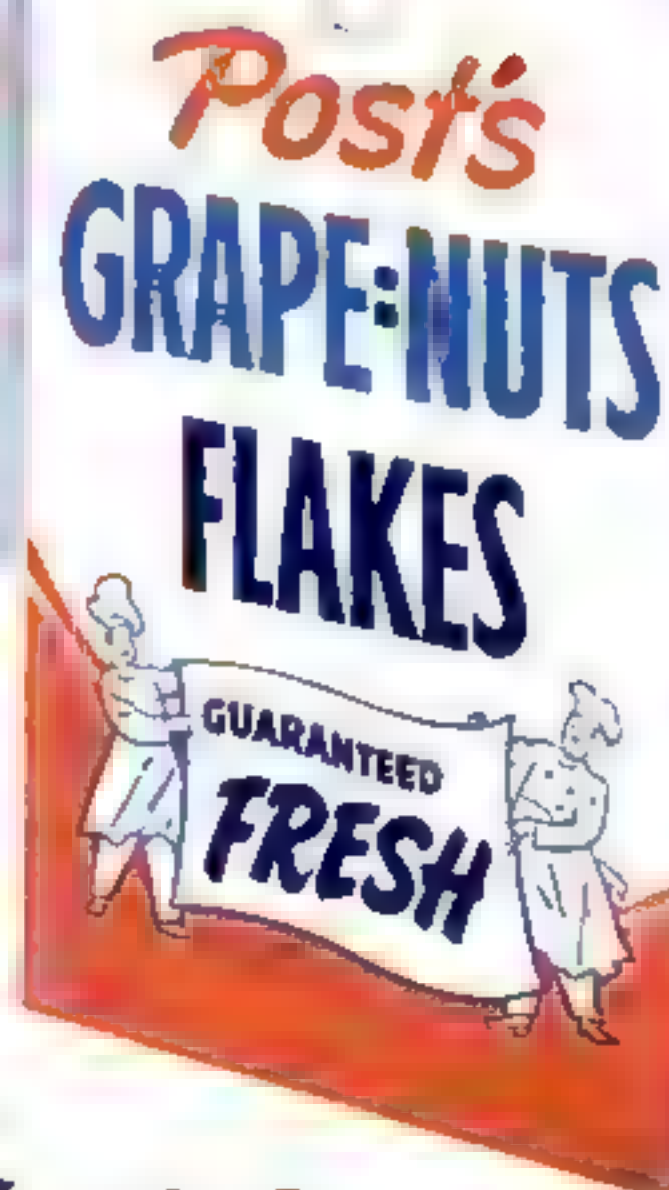
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THE HOUSE OF COMMONS PORTRAIT

This picture of Winston Churchill is by Sir Oswald Burley, one of the best-known contemporary British portrait painters. It was presented to the House of Commons by a member of the 1936-45 Parliament, but because no prime minister's portrait may be

hung in the House until ten years after his death, it is currently kept in the Speaker's Residence. Mr. Churchill sat for this portrait in his studio at Chartwell. The sittings took place in July 1946, when he was in the early stages of work on his memoirs.

THE WAR MEMOIRS OF WINSTON CHURCHILL

THE GRAND ALLIANCE: PART III

Pearl Harbor on the 9 o'clock news . . . Bedroom conferences in the White House . . . Roosevelt preaches hellfire to Litvinov

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It was Sunday evening, December 7, 1941. Winant and Averell Harriman were alone with me at the table at Chequers. I turned on my small wireless set shortly after the nine o'clock news had started.

There were a number of items about the fighting on the Russian front and on the British front in Libya, at the end of which some few sentences were spoken regarding an attack by the Japanese on American shipping at Hawaii, and also Japanese attacks on British vessels in the Dutch East Indies. There followed a statement that after the news Mr. Somebody would make a commentary, and that the Brains Trust programme would then begin, or something like this. I did not personally sustain any direct impression, but Averell said there was something about the Japanese attacking the Americans, and, in spite of being tired and resting, we all sat up. By now the butler, Sawyers, who had heard what had passed, came into the room, saying, "It's quite true. We heard it ourselves outside. The Japanese have attacked the Americans." There was a silence. I got up from the table and walked through the hall to the office, which was always at work. I asked for a call to the President. The Ambassador followed me out, and, imagining I was about to take some irrevocable step, said, "Don't you think you'd better get confirmation first?"

In two or three minutes Mr. Roosevelt came through. "Mr. President, what's this about Japan?" "It's quite true," he replied. "They have attacked us at Pearl Harbour. We are all in the same boat now." I put Winant on to the line and some interchanges took place, the Ambassador at first saying, "Good," "Good"—and then, apparently graver, "Ah!" I got on again and said, "This certainly simplifies things. God be with you," or words to that effect. We then went back into the hall and tried to adjust our thoughts to the supreme world event which had occurred, which was of so startling a nature as to make even those who were near the centre gasp. My two American friends took the shock with admirable fortitude. In fact, one might almost have thought they had been delivered from a long pain.

A prodigious Congressional Inquiry published its findings in 1946 in which every detail was exposed of the events leading up to the war

between the United States and Japan and of the failure to send positive "Alert" orders through the military departments to their fleets and garrisons in exposed situations. Every detail, including the decoding of secret Japanese telegrams and their actual texts, has been exposed to the world in forty volumes. The strength of the United States was sufficient to enable them to sustain this hard ordeal required by the spirit of the American Constitution.

I do not intend in these pages to attempt to pronounce judgment upon this tremendous episode in American history. We know that all

the great Americans round the President and in his confidence felt, as acutely as I did, the awful danger that Japan would attack British or Dutch possessions in the Far East, and would carefully avoid the United States, and that in consequence Congress would not sanction an American declaration of war. The American leaders understood that this might mean vast Japanese conquests, which, if combined with a German victory over Russia and thereafter an invasion of Great Britain, would leave America alone to face an overwhelming combination of triumphant aggressors. Not only the great moral causes which were at stake would be cast away, but the very life of the United States, and their people, as yet but half awakened to their perils, might be broken. The President and his trusted friends had writhed under the restraints of a Congress whose House of Representatives had a few months before passed



THE JAPS LAUGHED FIRST

Aboard an aircraft carrier on the way to Pearl Harbor, Japanese pilots laugh gleefully at radio program broadcast from Honolulu, their unsuspecting target. Photograph is from Japanese movie.

by only a single vote the necessary renewal of compulsory military service, without which their Army would have been almost disbanded in the midst of the world convulsion. Roosevelt, Hull, Stimson, Knox, General Marshall, Admiral Stark, and, as a link between them all, Harry Hopkins, had but one mind. Future generations of Americans and free men in every land will thank God for their vision.

A Japanese attack upon the United States was a vast simplification of their problems and their duty. How can we wonder that they regarded the actual form of the attack, or even its scale, as incomparably less important than the fact that the whole American nation would be united for its own safety in a righteous cause as never before?

NAVAL DISASTER IN THE EAST

Mr. Churchill recalls the sinking of "Repulse" and "Prince of Wales"

I CONVENED a meeting, mostly Admiralty, in the Cabinet War Room at 10 o'clock on the night of December 9, 1941 to review the naval position. We had lost the command of every ocean except the Atlantic. Australia and New Zealand and all the vital islands in their sphere were open to attack. We had only one key weapon in our hands. The *Prince of Wales* and the *Repulse* had arrived at Singapore as part of a task force under the command of Admiral Sir Tom Phillips. How should we use them now? Obviously they must go to sea and vanish among the innumerable islands. There was general agreement on that.

I thought myself they should go across the Pacific to join what was left of the American Fleet. It would be a proud gesture at this moment, and would knit the English-speaking world together. We had already cordially agreed to the American Navy Department withdrawing three capital ships from the Atlantic. Thus in a few months there might be a fleet in being on the west coast of America capable of fighting a decisive sea battle if need be. The existence of such a fleet and of such a fact would be the best possible shield to our brothers in Australasia. We were all much attracted by this line of thought. But as the hour was late we decided to sleep on it, and settle the next morning what to do with the *Prince of Wales* and the *Repulse*.

Within a couple of hours they were at the bottom of the sea.

THE tragedy of these ships, in which Chance played so fatal a part, must now be told. The *Prince of Wales* and *Repulse* had reached Singapore on December 2. On December 5 Admiral Tom Phillips arrived in Manila by air to discuss possible joint action with General MacArthur and Admiral Hart. Admiral Hart agreed that four American destroyers should join Phillips's flag. Both Admi-

als felt that neither Singapore nor Manila could at the moment be a suitable base for an Allied Fleet. Next day news came that a large Japanese seaborne expedition had entered the Gulf of Siam. It was clear that decisive events were at hand. Phillips got back to Singapore on the morning of the 7th. Soon after midnight on the 8th it was reported that a landing was actually in progress at Kota Bharu, north of Singapore on the Malay Peninsula, and later that other landings were being made still farther to the north near Singora and also at Patani. A major invasion of Malaya had begun.

Admiral Phillips judged it his duty to strike at the enemy while they were disembarking. At a meeting of his senior officers all agreed that it was impossible for the Navy to stand out of the battle at this critical stage. He reported his intentions to the Admiralty. He requested the Singapore Air Command to move fighters to our northern airfields, and requested the utmost help from our meagre Air Force—namely, reconnaissance 100 miles north of his squadron on December 9, reconnaissance off Singora from daylight on December 10, and fighter protection over Singora on the morning of December 10. This last all-important aid could not be given, first because of the expected attack on Singapore, and secondly because the northern airfields were already untenable. The Admiral had sailed at 5.35 p.m. on the 8th with the *Prince of Wales* and *Repulse* and the destroyers *Electra*, *Express*, *Vampire*, and *Tenedos* when this signal reached him. It added the warning that large Japanese bomber forces were based in Southern Indo-China. As the frequent rain squalls and low cloud were unfavourable for air action, Phillips resolved to press on. On the evening of the 9th the weather cleared, and he soon had reason to believe that he was being shadowed by enemy aircraft. The hope of surprise was gone, and heavy air attacks must be expected

THE PRIME MINISTER ON A VARIETY OF SUBJECTS

Winston Churchill is a staunch believer in the conduct of affairs by the written word. Despite the press of his duties as Prime Minister and Minister of Defence, he always found time to put on paper his views on a vast array of subjects. Here are a few of the more personal papers, selected from the more than 2,000 minutes and telegrams he wrote in 1941:

ON FOOD

I hope the term "Communal Feeding Centres" is not going to be adopted. It is an odious expression, suggestive of Communism and the workhouse. I suggest you call them "British Restaurants." Everybody associates the word "restaurant" with a good meal, and they may as well have the name if they cannot get anything else.

ON ARMY ATHLETICS

Please see the *Times* of February 4. Is it really true that a seven-mile cross-country run is enforced upon all in this division, from generals to privates? . . . The duty of officers is no doubt to keep themselves fit, but still more to think for their men, and to take decisions affecting their safety or comfort. Who is the general of this division, and does he run the seven miles himself? If so, he may be more useful for football than war. Could Napoleon have run seven miles across country at Austerlitz? Perhaps it was the other fellow he made run. In my experience, based on many years' observation, officers with high athletic qualifications are not usually successful in the higher ranks.

ON ARMY DISCIPLINE

I see some odd court-martial cases mentioned in the papers. First, a sergeant who told a Home Guard lieutenant "So what?" and "Put a sock in it" in the presence of troops, but who was merely reprimanded. He should surely have been reduced to the ranks. Second, some soldiers

who were heard calling the sergeants "Bastards with three stripes," but who apparently were honourably acquitted on the grounds that this was a word of common use in the Army. The major giving evidence said he had often turned a deaf ear to it when used about himself.

In sharp contrast, two Canadians who deserted in Canada, and made their way over here after great adventure in order to fight, received sixty days. . . .

ON BUREAUCRACY

You spoke to me the other day about the length of telegrams. I feel that this is an evil which ought to be checked. Ministers and Ambassadors abroad seem to think that the bigger the volume of their reports home the better is their task discharged. . . . It is sheer laziness not compressing thought into a reasonable space. I try to read all these telegrams, and I think the volume grows from day to day. . . .

There is too much truth in what Dr. Burgin says [in his letter of complaint about the State as an employer] for him to be put off by the usual official grimace. . . . When one is in office one has no idea how damnable things can feel to the ordinary rank and file of the public. . . .

ON GOLD

How much gold have we actually got left in this island or under our control in South Africa? Don't be alarmed: I am not going to ask you for anything.

ON HORSE-RACING

I see a note in the *Daily Telegraph* that you are shortly going to make a statement to Parliament on the future of horse-racing. Will you kindly let me know beforehand what you think of saying? If anything were done which threatened to terminate horse-racing in time of war or ruin the bloodstock it would be necessary that the whole matter should be thrashed out in Cabinet first.



MARCH OF TIME

THE ALLIES IN CHAINS

This Japanese cartoon, one of a series with English captions by an artist signing himself "Sapajou" (a kind of monkey), illustrates Japs' confidence in early 1942 that the Allies' time in the Far East was running out. Although Japan was not at war with Russia, Stalin was shown chained with Roosevelt and Churchill.

the next morning near Singora. At this Admiral Phillips reluctantly abandoned his daring enterprise, and after dark turned homewards. He had certainly done his best, and all might have yet been well. About midnight however by a hard mischance another enemy landing was reported at Kuantan, more than 150 miles south of Kota Bharu. Admiral Phillips thought it unlikely that his force, last sighted by the enemy on a northerly course, would be expected so far south by daylight on the 10th. After all he might achieve surprise. He accepted the risk and turned his ships towards Kuantan.

JAPANESE records make no claim to have sighted the British squadron from the air on the 9th, but a submarine reported them steering north at 2 p.m. The Japanese 22nd Air Flotilla, based near Saigon, was loading bombs for an attack on Singapore. They immediately exchanged bombs for torpedoes and decided to make a night attack on the British ships. They found nothing, and returned to their base by midnight. Before dawn on the 10th another Japanese submarine reported that the British were steering south, and at 6 a.m. a searching force of nine Japanese aircraft set forth, followed an hour later by a powerful striking force of eighty-four bombers and torpedo bombers, organised in waves of about nine aircraft each.

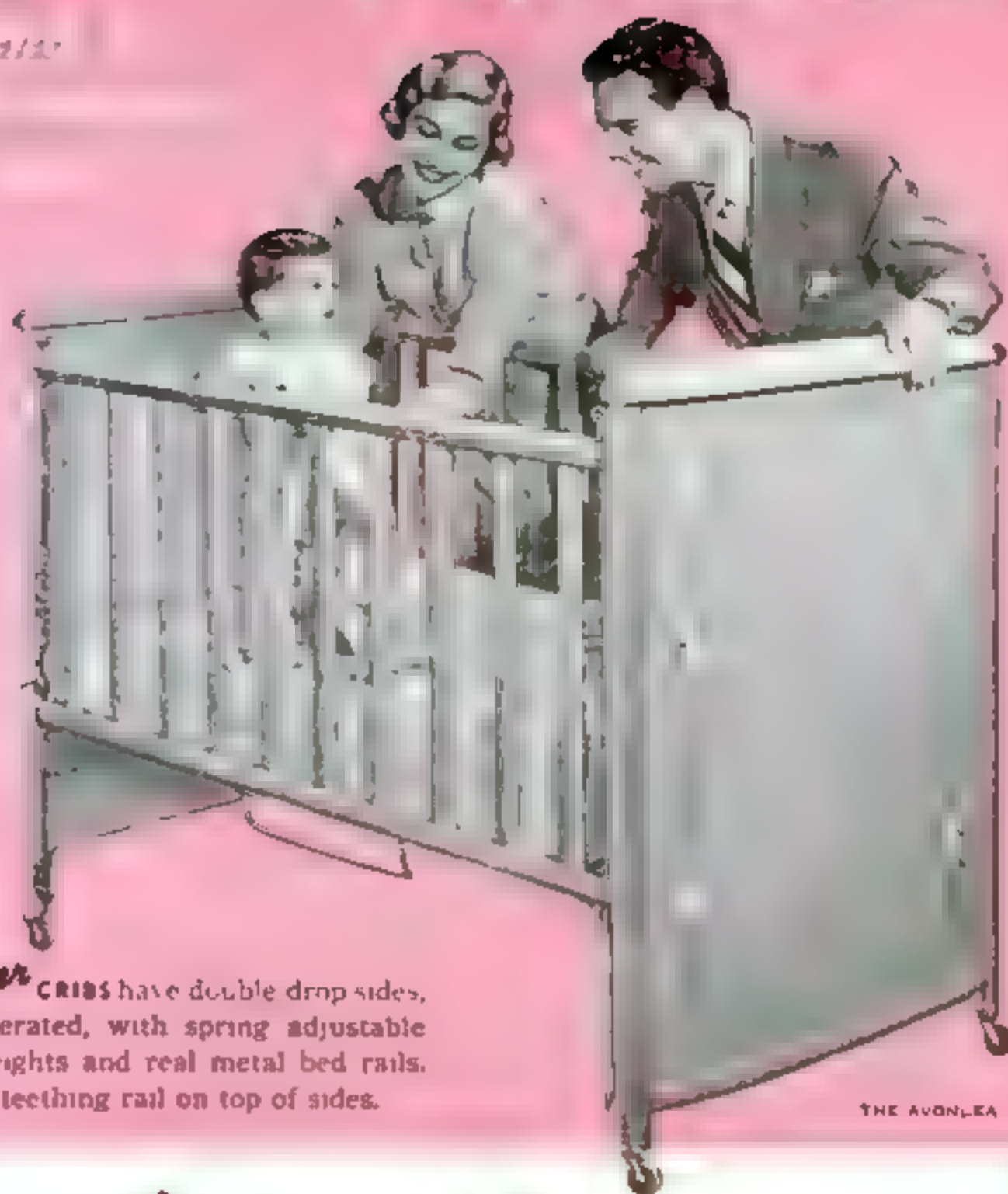
The report of the landing at Kuantan proved false, but as no amending message had been sent from Singapore the Admiral remained expectant, until soon after daylight the destroyer *Express* reached the harbour and found no sign of the enemy. Before resuming their southerly course the squadron spent some time in searching for a tug and other small craft which had been sighted earlier. But now the crisis came and fortune was hard. The Japanese air fleet had ranged as far south as Singapore without sighting anything. It was returning home on a northerly course, which by chance led them straight to their quarry.

At 10.20 a.m. a shadowing aircraft was sighted by the *Prince of Wales*, and soon after 11 a.m. the first wave of bombers ap-

CONTINUED ON NEXT PAGE

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THE AVONLEA

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CHURCHILL'S MEMOIRS CONTINUED

peared. The enemy attacked in successive waves. In the first the *Repulse* received one hit from a bomb which caused a fire, but this was soon under control and the ship's speed was not impaired. In the second the *Prince of Wales* was struck simultaneously by what seemed to be two torpedoes close together, which caused very severe damage and flooding. Both port propellers were put out of action, and the ship was never again under complete control. The *Repulse* was not hit in this attack. A few minutes later another wave closed in on the *Repulse*, and again she escaped damage. The ships by now had become somewhat separated, and Captain Tennant, having made an emergency signal to Singapore, "Enemy aircraft bombing," turned the *Repulse* towards the *Prince of Wales*.

At 12.22 p.m. another attack proved fatal to both capital ships. After successfully avoiding a number of torpedoes the *Repulse* was struck amidships. Soon afterwards, in yet another attack, a torpedo wrecked her steering-gear, and then in quick succession three more torpedoes found their mark. Captain Tennant realised that his ship was doomed. He promptly ordered all hands on deck, and there is no doubt that this timely action saved many lives. At 12.33 p.m. the *Repulse* turned over and sank. The *Prince of Wales* had received two more torpedo hits at about 12.23 p.m., and another shortly afterwards. Her speed was reduced to eight knots, and she too was soon in a sinking condition. After another bombing attack, which scored one more hit, she capsized and sank at 1.20 p.m. The destroyers rescued two thousand officers and men out of nearly three thousand. The Commander-in-Chief, Admiral Sir Tom Phillips, and his Flag-Captain, John Leach, were drowned.

IN reply to certain questions of the Chiefs of Staff about why no fighter aircraft were sent from Singapore to aid the squadron, it was confirmed that Admiral Phillips did not signal his change of plan on the 9th, as he was keeping wireless silence. His position on the morning of the 10th was not therefore known in Singapore till Captain Tennant's emergency signal was received at noon. Fighters were then sent at once. They arrived only in time to witness the sinking of the *Prince of Wales*.

In judging the actions of Admiral Phillips during these calamitous days it should be emphasized that there were sound reasons for his belief that his intended attack at Kuantan would be outside the effective range of enemy shore-based torpedo bombers, which were his chief anxiety, and that he would only have to deal with hastily organised strikes by ordinary long-range bombers during his retirement. The distance from the Saigon airfields to Kuantan was over four hundred miles, and at this date no attacks by torpedo bombers had been attempted at anything approaching this range. The efficiency of the Japanese in air warfare was at this time greatly under-estimated both by ourselves and by the Americans.

TEXT CONTINUED ON PAGE 71



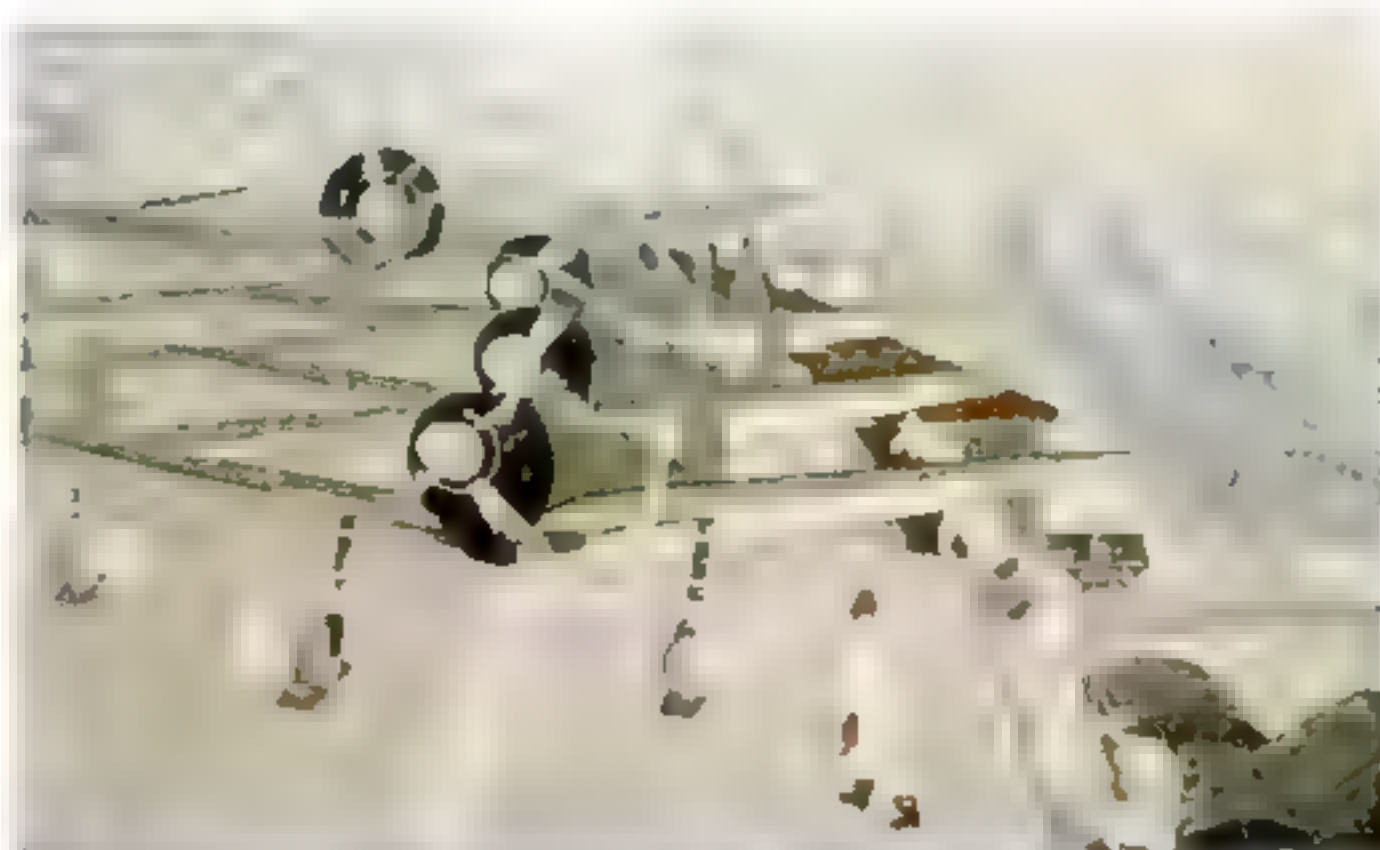
THEIR SHIPS WENT DOWN

When the *Prince of Wales* and *Repulse* were sunk they were with squadron led by Vice-Admiral Sir Tom Phillips (center). Phillips and the *Prince's* commander, Captain John Leach (left), were drowned. Captain W. G. Tennant (right) of the *Repulse* survived.

HOW WAR CAME TO PACIFIC

Japanese artists painted a boastful record of their early victories

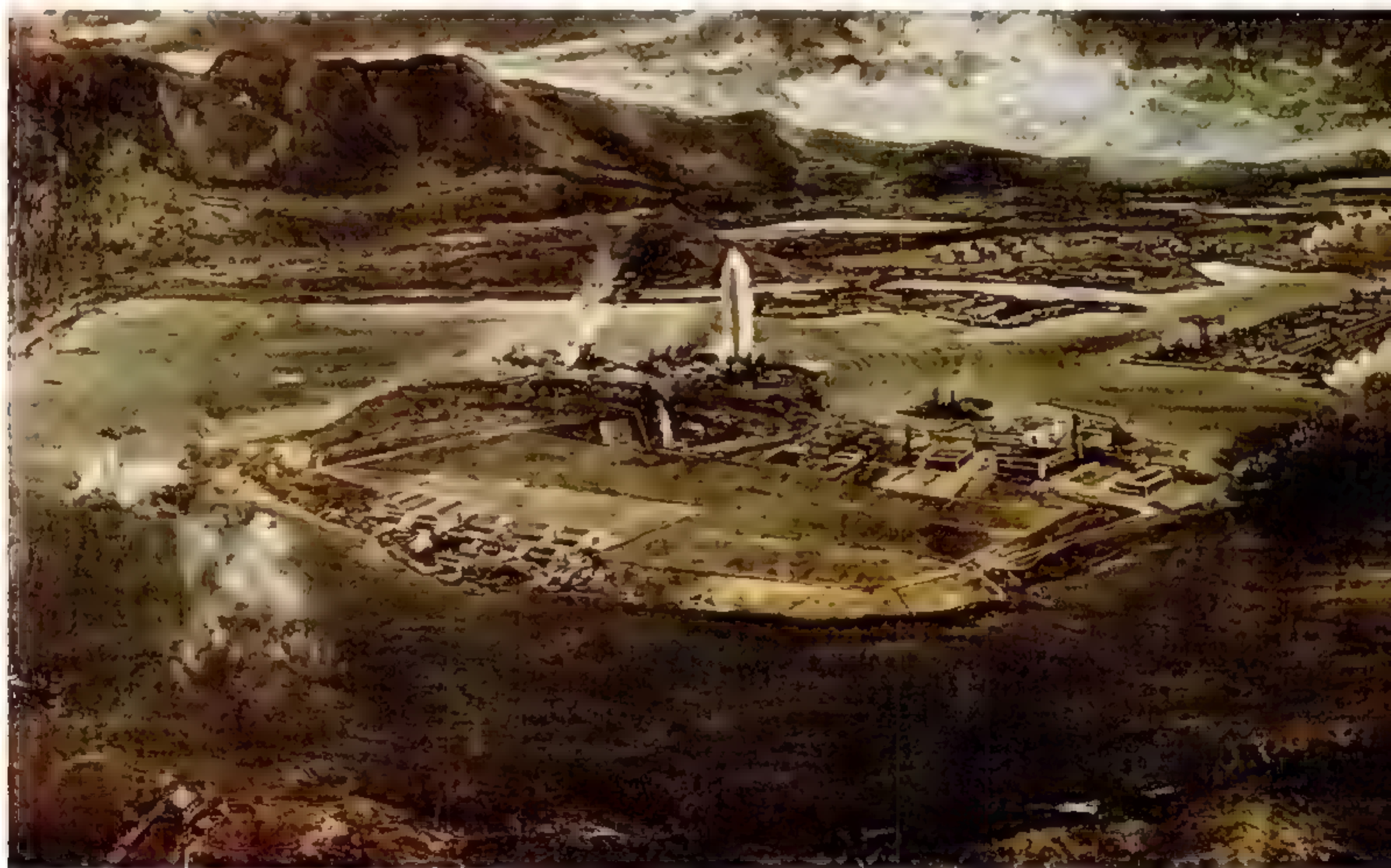
As early as 1938 the Japanese government picked 100 of the country's 20,000 registered artists for war duty. At that time they had only the Japanese invasion of China to record. Three years later, when the Japanese attacked U.S., British and Dutch possessions in the Pacific, the artists were as fully indoctrinated as carrier-plane pilots for patriotic missions. Technically they were well equipped; among the men selected were a number with international reputations. Few of them were on the spot to see the actions they painted, but they often visited the battle areas afterwards, talked to participants and studied official photographs. They also received specific guidance from military authorities on what was wanted. The results, as the examples on this and the following pages show, were not often notable as art, though perhaps effective as propaganda. Apparently the artists strove for photographic "realism"; at the same time some of them sought to give their diminutive soldiers heroic proportions. Many of them abandoned their own traditional, delicate style to imitate the techniques



"TAKE-OFF FROM CARRIER" illustrates prelude to Pearl Harbor. Artist was Shori Arai, who retained Japanese style in his paintings.

of Western painters. For subject matter, in the weeks following Pearl Harbor, they had more than enough victories to glut the hungriest nationalism. These were the days when it seemed that nothing could prevent the Japs' taking over anything they wanted in the Pacific or in Asia. Mr. Churchill, taking as always the long view, philosophically accepted the catastrophic losses of December 1941 and the early months of 1942. Recalling how he reacted to the news of Pearl Harbor, he writes: "No American will think it wrong of me if I proclaim that to have the United

States at our side was to me the greatest joy. I could not foretell . . . events. I do not pretend to have measured accurately the martial might of Japan, but now at this very moment I knew the United States was in the war, up to the neck and in to the death. So we had won after all! Yes, after Dunkirk; after the fall of France . . . after eighteen months of lonely fighting and nineteen months of my responsibility in dire stress. . . . Being saturated and satiated with emotion and sensation, I went to bed and slept the sleep of the saved and thankful."



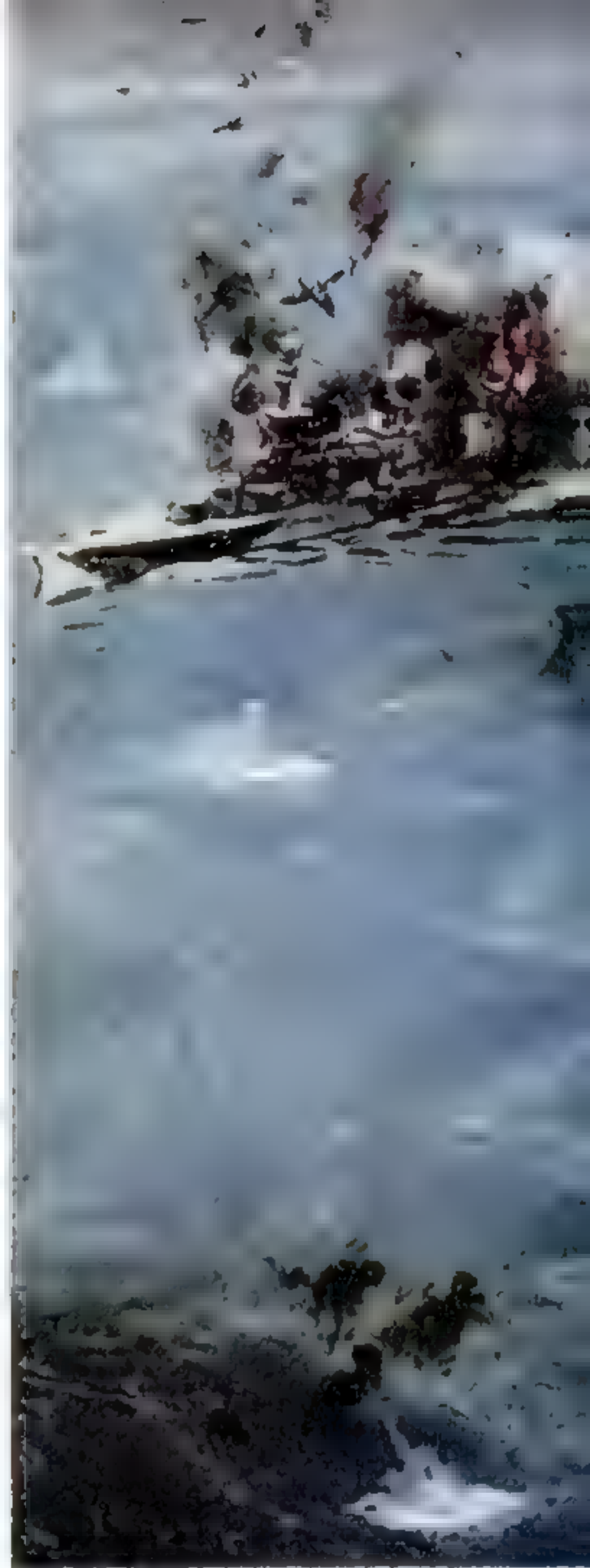
PEARL HARBOR ATTACK was painted by Tsuguharu Foujita from aerial photographs. American battleships moored on the far side of Ford

Island, center of the picture, are being torpedeed. Foujita lived in Paris before the war, was famous for his paintings of cats and catlike nudes.



CAVITE Navy Yard, southwest of Manila, was hit by Japanese bombers and Zero fighters Dec.

10, 1941. Picture was painted by Chosei Miwa, best known for paintings of birds and flowers



GUAM was taken by 5,000 Japs. The island's garrison was 365 U.S. Marines, a few Navy men,

308 Guamanians. This painting by Kehei Ezaki shows a Jap column advancing along the beach.

"TERRIBLE The Allies paid dearly

The devastating air attack by the Japanese against Pearl Harbor was only the beginning. Everywhere disaster followed disaster. Mr. Churchill was not surprised; "I expected terrible forfeits in the East," he writes. He felt most keenly the loss of the battleship *Prince of Wales* (above). She was a new ship and flew the flag of his good friend and former Vice Chief of the Naval Staff, Vice-Admiral Sir Tom Phillips. She and the battle cruiser *Repulse* were almost the whole of British naval strength in the Far East. In his memoirs Mr. Churchill recalls how the terrible news was delivered to him on the morning of Dec. 10: "... The telephone at my bedside rang. It was the First Sea Lord. His voice sounded odd. He gave a sort of



OFF MALAYA *Prince of Wales* (foreground) and *Repulse* were sunk. Kenichi Nakamura's

painting (above) is wrong, however, in showing an escorting destroyer (top center) going down.

FORFEITS" for being unprepared

cough and gulp, and at first I could not hear quite clearly. 'Prime Minister, I have to report to you that the *Prince of Wales* and the *Repulse* have both been sunk by the Japanese—we think by aircraft. Tom Phillips is drowned.' 'Are you sure it's true?' 'There is no doubt at all.' So I put the telephone down. I was thankful to be alone. In all the war I never received a more direct shock. . . . As I turned over and twisted in bed the full horror of the news sank in upon me. There were no British or American capital ships in the Indian Ocean or the Pacific except the American survivors of Pearl Harbour, who were hastening back to California. Over all this vast expanse of waters Japan was supreme, and we everywhere weak and naked."



PALEMBANG, oil center on Dutch Sumatra, was first assaulted by paratroops. Island's con-

quest was actually achieved by troops landed by Jap navy. Painting is by Saburo Miyamoto.



"GENERAL ATTACK ON HONG KONG" shows the island as it looks from across the harbor. Kowloon railway station is in foreground. Build-

ings are afire in Victoria as well as on the "Peak" above it. The artist is Hoshun Yamaguchi, considered one of greatest living Japanese artists.



"BATTLE OF NICHOLSON," by Saburo Miyamoto, depicts another aspect of the fighting for Hong Kong. Mount Nicholson, in the center

of the island, was fought over for several days, with the Japanese finally beating back the defending Winnipeg Grenadiers and Royal Scots

HECTIC DAYS IN THE U.S.

At the end of 1941 Mr. Churchill came here to work out war strategy

I MUST confess that my mind was so occupied with the whirl of events and the personal tasks I had to perform that my memory till refreshed had preserved but a vague impression of the days I spent in Washington at the end of 1941. The outstanding feature was of course my contacts with the President. We saw each other for several hours every day, and lunched always together, with Harry Hopkins as a third. We talked of nothing but business, and reached a great measure of agreement on many points, both large and small. Dinner was a more social occasion, but equally intimate and friendly. The President punctiliously made the preliminary cocktails himself, and I wheeled him in his chair from the drawing-room to the lift as a mark of respect, and thinking also of Sir Walter Raleigh spreading his cloak before Queen Elizabeth. I formed a very strong affection, which grew with our years of comradeship, for this formidable politician who had imposed his will for nearly ten years upon the American scene, and whose heart seemed to respond to many of the impulses that stirred my own. As we both, by need or habit, were forced to do much of our work in bed, he visited me in my room whenever he felt inclined, and encouraged me to do the same to him. Hopkins was just across the passage from my bedroom, and next door to him my travelling map room was soon installed. The President was much interested in this institution, which Captain Pim had perfected. He liked to come and study attentively the large maps of all the theatres of war which soon covered the walls, and on which the movement of fleets and armies was so accurately and swiftly recorded. It was not long before he established a map room of his own of the highest efficiency.

The first major design which was presented to me by the President was the drawing up of a solemn Declaration to be signed by all the nations at war with Germany and Italy, or with Japan. The President and I, repeating our methods in framing the Atlantic Charter, prepared drafts of the Declaration and blended them together. In principle, in sentiment, and indeed in language, we were in full accord.

SIMPLE festivities marked our Christmas. The traditional Christmas tree was set up in the White House garden, and the President and I made brief speeches from the balcony to enormous crowds gathered in the gloom. I venture to reprint here the words that I used, as they seemed to rise so naturally in my mind on this occasion and in these surroundings: "I spend this anniversary and festival far from my country, far from my family, yet I cannot truthfully say that I feel far from home. . . . I feel a sense of unity and fraternal association which, added to the kindness of your welcome, convinces me that I have a right to sit at your fireside and share your Christmas joys. . . .

"Ill would it be for us this Christmastide if we were not sure that no greed for the land or wealth of any other people, no vulgar ambition, no morbid lust for material gain at the expense of others, had led us to the field. . . . Therefore we may cast aside for this night at least the cares and dangers which beset us, and make for the children

an evening of happiness in a world of storm. . . . Let us grown-ups share to the full in their unstinted pleasures before we turn again to the stern task and the formidable years that lie before us, resolved that, by our sacrifice and daring, these same children shall not be robbed of their inheritance or denied their right to live in a free and decent world.

"And so, in God's mercy, a happy Christmas to you all."

The President and I went to church together on Christmas Day, and I found peace in the simple service and enjoyed singing the well-known hymns, and one, *O little town of Bethlehem*, I had never heard before. Certainly there was much to fortify the faith of all who believe in the moral governance of the universe.



AT THE WHITE HOUSE

Mr. Churchill cheerfully demonstrates the zipper on his one-piece siren suit for photographers on White House grounds. The girl is Harry Hopkins' daughter Diana; the dog is Roosevelt's Fala.

just where I expected them. The loudest response was when, speaking of the Japanese outrage, I asked, "What sort of people do they think we are?" The sense of the might and will-power of the American nation streamed up to me from the august assembly. Who could doubt that all would be well?

Afterwards the President, who had listened in, told me I had done quite well.

I TRAVELLED by the night train of December 28-29 to Ottawa. On the 30th I spoke to the Canadian Parliament. The preparation of my two transatlantic speeches, transmitted all over the world, amid all the flow of executive work, which never stopped, was an extremely hard exertion. Delivery is no serious burden to a hard-bitten politician, but choosing what to say and what not to say in such an electric atmosphere is anxious and harassing. I did my best. The most successful point in the Canadian speech was about the Vichy Government, with whom Canada was still in relations. "It was their duty [in 1940] and it was also their interest to go to North Africa, where they would have been at the head of the French Empire. . . . But their generals misled them. When I warned them that Britain would fight on alone whatever they did, their generals told their Prime Minister and his divided Cabinet, 'In three weeks England will have her neck wrung like a chicken.' Some chicken! Some neck!"

This went very well.

ON my return to the White House all was ready for the signature of the United Nations Pact. The title of "United Nations" was substituted by the President for that of "Associated Powers." I thought this a great improvement. I showed my friend the lines from Byron's *Childe Harold*:

Here, where the sword United Nations drew,
Our countrymen were warring on that day!
And this is much, and all which will not pass away.

The President was wheeled in to me on the morning of January 1. I got out of my bath, and agreed to the draft. The Declaration could not by itself win battles, but it set forth who we were and what we were fighting for:

1. Each Government pledges itself to employ its full resources, military or economic, against those members of the Tripartite Pact and its adherents with which such Government is at war.
2. Each Government pledges itself to co-operate with the Governments signatory hereto and not to make a separate armistice or peace with the enemies.

Many telegrams had passed between Washington, London, and Moscow, but now all was settled. The President had exerted his most fervent efforts to persuade Litvinov, the Soviet Ambassador, newly restored to favour by the turn of events, to accept the phrase "religious freedom." He was invited to luncheon with us in the President's room on purpose. After his hard experiences in his own country he had to be careful. Later on the President had a long talk with him alone about his soul and the dangers of hell-fire. The accounts which Mr. Roosevelt gave us on several occasions of what he said to the Russian were impressive. Indeed, on one occasion I promised Mr. Roosevelt to recommend him for the position of Archbishop of Canterbury if he should lose the next Presidential election. I did not however make any official recommendation to the Cabinet or the Crown upon this point, and as he won the election in 1944 it did not arise. Litvinov reported the issue about "religious freedom" in evident fear and trembling to Stalin, who accepted it as a matter of course.

Among other requests which I had made to the President the movement of three or four United States divisions into Northern Ireland stood high. Every American division which crossed the Atlantic gave us freedom to send one of our matured British divisions out of the country to the Middle East, or of course—and this was always in my mind—to North Africa. Mr. Stimson, the War Secretary, and his professional advisers also found this move to Ireland in harmony with their inclination to invade Europe at the earliest moment. Thus all went forward smoothly. We were anxious that the enemy should be aware of this strategic movement, and made the fact public, without of course specifying numbers. We hoped also that this would detain German troops in the West and thus be not unhelpful to the Russian struggle. The British public and newspapers could not be made privy to our reasons, and many unsound criticisms arose. "Why," for instance, it was asked, "should American troops be sent to Ulster? Would they not be much better employed at Singapore?"

It was of course physically impossible to send an army all that way in time to be of any use.

IT may well be thought by future historians that the most valuable and lasting result of our first Washington conference—"Arcadia," as it was code-named—was the setting up of

the now famous "Combined Chiefs of Staff Committee." Its headquarters were in Washington, but since the British Chiefs of Staff had to live close to their own Government they were represented by high officers stationed there permanently. However sharp the conflict of views at the Combined Chiefs of Staff meeting, however frank and even heated the argument, sincere loyalty to the common cause prevailed over national or personal interests. There never was a more serviceable war machinery established among allies, and I rejoice that in fact if not in form it continues to this day.

The enjoyment of a common language was of course a supreme advantage in all British and American discussions. There were however differences of expression, which in the early days led to an amusing incident. The British Staff prepared a paper which they wished to raise as a matter of urgency, and informed their American colleagues that they wished to "table it." To the American Staff "tabling" a paper meant putting it away in a drawer and forgetting it. A long and even acrimonious argument ensued before both parties realised that they were agreed on the merits and wanted the same thing.

CONTINUED concentration of mind upon the war as a whole, my constant discussions with the President and his principal advisers and with my own, my two speeches and my journey to Canada, together with the heavy flow of urgent business requiring decision and all the telegrams interchanged with my colleagues at home, made this period in Washington not only intense and laborious but even exhausting. My American friends thought I was looking tired and ought to have a rest. Accordingly Mr. Stettinius very kindly placed his small villa in a seaside solitude near Palm Beach at my disposal, and on January 4 I flew down there.

Five days we passed in the Stettinius villa, lying about in the shade or the sun, bathing in the pleasant waves, in spite of the appearance on one occasion of quite a large shark. They said it was only a "ground shark"; but I was not wholly reassured. It is as bad to be eaten by a ground shark as by any other. So I stayed in the shallows from then on.

AN amusing, though at the moment disconcerting, incident occurred. Mr. Wendell Willkie had asked to see me. At this time there was tension between him and the President. Roosevelt had not seemed at all keen about my meeting prominent members of the Opposition, and I had consequently so far not done so. Having regard however to Wendell Willkie's visit to England a year before in January 1941, I felt that I ought not to leave American shores without seeing him. I therefore put a call through to him on the

evening of the 5th. After some delay I was told, "Your call is through." I said in effect, "I am so glad to speak to you. I hope we may meet. I am travelling back by train to-morrow night. Can you not join the train at some point and travel with me for a few hours? Where will you be on Saturday next?" A voice came back: "Why, just where I am now, at my desk." To this I replied, "I do not understand." "Whom do you think you are speaking to?" I replied, "To Mr. Wendell Willkie, am I not?" "No," was the answer, "you are speaking to the President." I did not hear this very well, and asked, "Who?" "You are speaking to me," came the answer, "Franklin Roosevelt." I said, "I did not mean to trouble you at this moment. I was trying to speak to Wendell Willkie, but your telephone exchange seems to have made a mistake." "I hope you are getting on all right down there and enjoying yourself," said the President.



IN CONGRESS

Churchill peers over his glasses and makes an admonitory point in his speech to the U.S. Congress. Behind him are Acting Speaker of the House William Cole (left), Vice President Henry Wallace.

CHURCHILL'S AMERICAN ANCESTORS

When Winston Churchill addressed the American Congress during his visit here in December 1941 he remarked, "I cannot help reflecting that if my father had been American and my mother British, instead of the other way round, I might have got here on my own." The most prominent family in Mr. Churchill's distaff American connection is the Jeromes. A Timothy Jerome emigrated to the New World from the Isle of Wight around 1713. There was at least one Jerome in the Revolutionary army. The family name attained national prominence through Mr. Churchill's American grandfather, Leonard Jerome (*right*). Born in 1817 at Pompey, a village near Syracuse, N.Y., he had a lively career in law, newspaper publishing and finance. He made a fortune in Wall Street, for a time represented the U.S. as consul at Ravenna and Trieste. He built a mansion on Madison Square in New York City; even its stables were handsomely carpeted. He was a great racing enthusiast; one of his horses, Kentucky, was a famous winner of his time. He often drove around New York in a coach drawn by a team of six horses of which, says Mr. Churchill, "he was an expert Whip." He was a founder of the Academy of Music in New York, helped get opera going in this country, was a friend of the great singers Jenny Lind and Adelina Patti. Leonard Jerome was a proud and imperious man. He conditionally consented to the marriage of his daughter to Lord Randolph Churchill (*below*), but when the Duke of Marlborough objected, Leonard Jerome thereupon withdrew his consent. He died in 1891 at Brighton, England.



HIS GRANDFATHER, Leonard Jerome, Mr. Churchill recalls as "a magnificent looking man with . . . flowing moustachios, a rather aquiline nose and very bright eyes." This portrait was painted when he was consul at Trieste.



HIS FATHER, Lord Randolph Churchill, proposed to Jennie Jerome two days after they met. Duke of Marlborough objected to this match for his son, consented only after Randolph agreed to run for Parliament.



HIS GRANDMOTHER, Clara Hall Jerome, took her daughters on the European trip during which Jennie Jerome met Lord Randolph Churchill. This portrait and Leonard Jerome's hang in Mr. Churchill's bedroom in London.



HIS MOTHER was one of the "three beautiful Jerome sisters." At the time she met Lord Randolph, Mr. Churchill has written,

her "singular beauty and gifted vivacity had excited general attention." This portrait shows her in fancy dress for a costume ball.

SET out by train to return to Washington on the night of the 9th, and reached the White House on the 11th. I found that great progress had been made by the Combined Chiefs of Staff, and that it was mostly in harmony with my views.*

The President convened a meeting on January 12, when there was complete agreement upon the broad principles and targets of the war. "The President," says the British record, "set great store on organising a 'Super-Gymnast'—i.e., a combined United States-British expedition to North Africa." It was settled to send two divisions of American troops to Northern Ireland. The President had told me privately that he would, if necessary as quickly as possible, send fifty thousand United States troops to Australia and the islands covering its approach by the Japanese. Twenty-five thousand were to go as soon as possible to occupy New Caledonia, and other stepping-stones between America and Australasia. On "Grand Strategy" the Staffs agreed that "only the minimum of forces necessary for the safeguarding of vital interests in other



IN OTTAWA

Mr. Churchill acknowledges the cheers of a crowd watching him enter the Canadian Parliament building, where he spoke on Dec. 30, 1941. His naval aide, Commander Charles Thompson, stands behind him; to the right is the then Prime Minister, Mackenzie King.

theatres should be diverted from operations against Germany." No one had more to do with obtaining this cardinal decision than General Marshall.

One evening the General came to see me and put a hard question. He had agreed to send nearly thirty thousand American soldiers to Northern Ireland. We had of course placed the two "Queens"—the only two 80,000-ton ships in the world—at his disposal for this purpose. General Marshall asked me how many men we ought to put on board, observing that boats, rafts, and other means of flotation could only be provided for about 8,000. If this were disregarded they could carry 16,000 men. I gave the following answer: "I can only tell you what *we* should do. You must judge for yourself the risks you will run. If it were a direct part of an actual operation, we should put all on board they could carry. If it were only a question of moving troops in a reasonable time, we should not go beyond the limits of life-boats, rafts, etc. It is for you to decide." He received this in silence and our conversation turned to other matters. In their first voyages these ships carried only the lesser numbers, but later on they were filled to the brim. As it happened, Fortune stood our friend.

*During his voyage to the U.S. Mr. Churchill prepared three papers on strategy. The first called for the occupation of North Africa in 1942; the second stressed the need of an aircraft-carrier building program to regain command of the Pacific; and the third set 1943 as the date for an invasion of German-occupied Europe.—ED.

CONTINUED ON NEXT PAGE

She was baffled!



How about you?



We asked a New York housewife,
"What's in this wrapped box?"

"It's bath salts...no, it's candy!" she said.
Both guesses were wrong!

It's easy to guess wrong about this wrapped box. It looks as though it might contain so many different kinds of things.

Actually, it's Modess—in the wonderful new-shape box! So skillfully shaped *not* to look like a napkin box, that the sharpest eyes couldn't guess what's inside the wrapping.

And to make sure you'll *always* get it neatly wrapped—Modess *now* wraps the boxes before they even reach your store. No delay or embarrassment for you. Of the leading brands, only Modess brings these two keep-a-secret extras. Same number of fine Modess napkins per box; same price. Regular, Junior, or Super sizes.

Modess—new-shape box
ready-wrapped...
saves embarrassment!



BACK HOME BY AIR

Flying to England from U.S., Churchill almost became a German target

ON the 14th of January I took leave of the President. He seemed concerned about the dangers of the voyage. We flew in beautiful weather from Norfolk to Bermuda, where the *Duke of York*, with escorting destroyers, awaited us inside the coral reefs. I travelled in an enormous Boeing flying-boat, which made a most favourable impression upon me. During the three hours' trip I made friends with the chief pilot, Captain Kelly Rogers, who seemed a man of high quality and experience. Presently I asked him, "What about flying from Bermuda to England? Can she carry enough petrol?" Under his stolid exterior he became visibly excited. "Of course we can do it. The present weather forecast would give a forty miles an hour wind behind us. We could do it in twenty hours." When we landed I opened the matter to Portal and Pound. Formidable events were happening in Malaya; we ought all to be back at the earliest moment. The Chief of the Air Staff said at once that he thought the risk wholly unjustifiable. The First Sea Lord supported his colleague. It occurred to me that both these officers thought my plan was to fly myself and leave them to come back in the *Duke of York*, so I said, "Of course there would be room for all of us." They both visibly changed countenance at this. After a considerable pause Portal said that the matter might be looked into, and that he would discuss it at length with the captain of the flying-boat and go into weather prospects with the meteorological authorities. I left it at that.

Two hours later they both returned, and Portal said that he thought it might be done. So we settled to go unless the weather deteriorated. The starting time was 2 p.m. the next day.

Commander Thompson, R.N., my Flag Commander, Tommy as I called him, was in terror that there would be no room for him. He explained how deeply wounded he was at the idea of going home by sea. I reminded him of his devotion to the naval service, and of the pleasures to a hardy sailor of a life on the ocean wave. He was quite inconsolable. However, he had a plan. He had persuaded one of the stewards of the flying-boat to let him take his place; he would do the washing up himself. Tommy thought that if at the last moment the captain were confronted with the arrangement he would make no objection. I shrugged my shoulders, and on this we went to bed in the small hours of the morning.

I woke up unconscionably early with the conviction that I should certainly not go to sleep again. I must confess that I felt rather fright-

ened. I thought perhaps I had done a rash thing, that there were too many eggs in one basket. But the die was cast. At noon we reached the flying-boat by launch. Tommy stood disconsolate. The captain had brushed his project aside in a way that captains have. So we taxied out to the far end of the harbour, leaving Tommy lamenting.

It was quite a job to get off the water. There was really no danger; we were in sure hands. The flying-boat lifted ponderously a quarter of a mile from the reef, and we had several hundred feet of height to spare. There is no doubt about the comfort of these great flying-boats. I had

a good broad bed in the bridal suite at the stern with large windows on either side. It was quite a long walk, thirty or forty feet, downhill through the various compartments to the saloon and dining-room, where nothing was lacking in food or drink. The motion was smooth, the vibration not unpleasant, and we passed an agreeable afternoon and had a merry dinner. I went to bed and slept soundly for several hours.

I woke just before the dawn, and went forward to the controls. The daylight grew. Beneath us was an almost unbroken floor of clouds. After sitting for an hour or so in the co-pilot's seat I sensed a feeling of anxiety around me. We were supposed to be approaching England from the south-west and we ought already to have passed the Scilly Islands, but they had not been seen through any of the gaps in the cloud floor. As we had flown for more than ten hours through mist and had had only one sight of a star in that time, we might well be slightly off our course after such a lengthy flight. Wireless communication

was of course limited by the normal wartime rules. Presently Portal, who had been studying the position, had a word with the captain, and then said to me, "We are going to turn north at once." This was done, and after another half-hour in and out of the clouds we sighted England, and soon arrived over Plymouth, where, avoiding the balloons, which were all shining, we landed comfortably.

Later on I learnt that if we had held on our course for another five or six minutes before turning northwards we should have been over the German batteries in Brest. Moreover, the decisive correction which had been made brought us in, not from the south-west, but from just east of south—that is to say, from the enemy's direction rather than from that from which we were expected. This had the result, as I was told some weeks later, that we were reported as a hostile bomber coming in from Brest, and six Hurricanes from Fighter Command were ordered out to shoot us down. However, they failed in their mission.



AT THE "BERWICK'S" CONTROLS

On the four-engined plane which flew him from Norfolk to Bermuda in 1942 and then took him to England, Mr. Churchill, who had learned to fly as early as 1912, tried his hand at the controls for 20 minutes. This was Mr. Churchill's first transatlantic flight.

THIS INSTALMENT CONCLUDES "THE GRAND ALLIANCE"

A condensed version of Mr. Churchill's third volume of war memoirs has been presented in three issues of *LIFE*, simultaneously with serial publication in the *New York Times*. The full text will be published in

the U.S. by Houghton Mifflin Company in April; like the first two volumes, it will also be a Book-of-the-Month Club choice. The fourth volume of the memoirs will be published in *LIFE* at a date to be announced.

Wonder-quick... and oh, so wonderful!

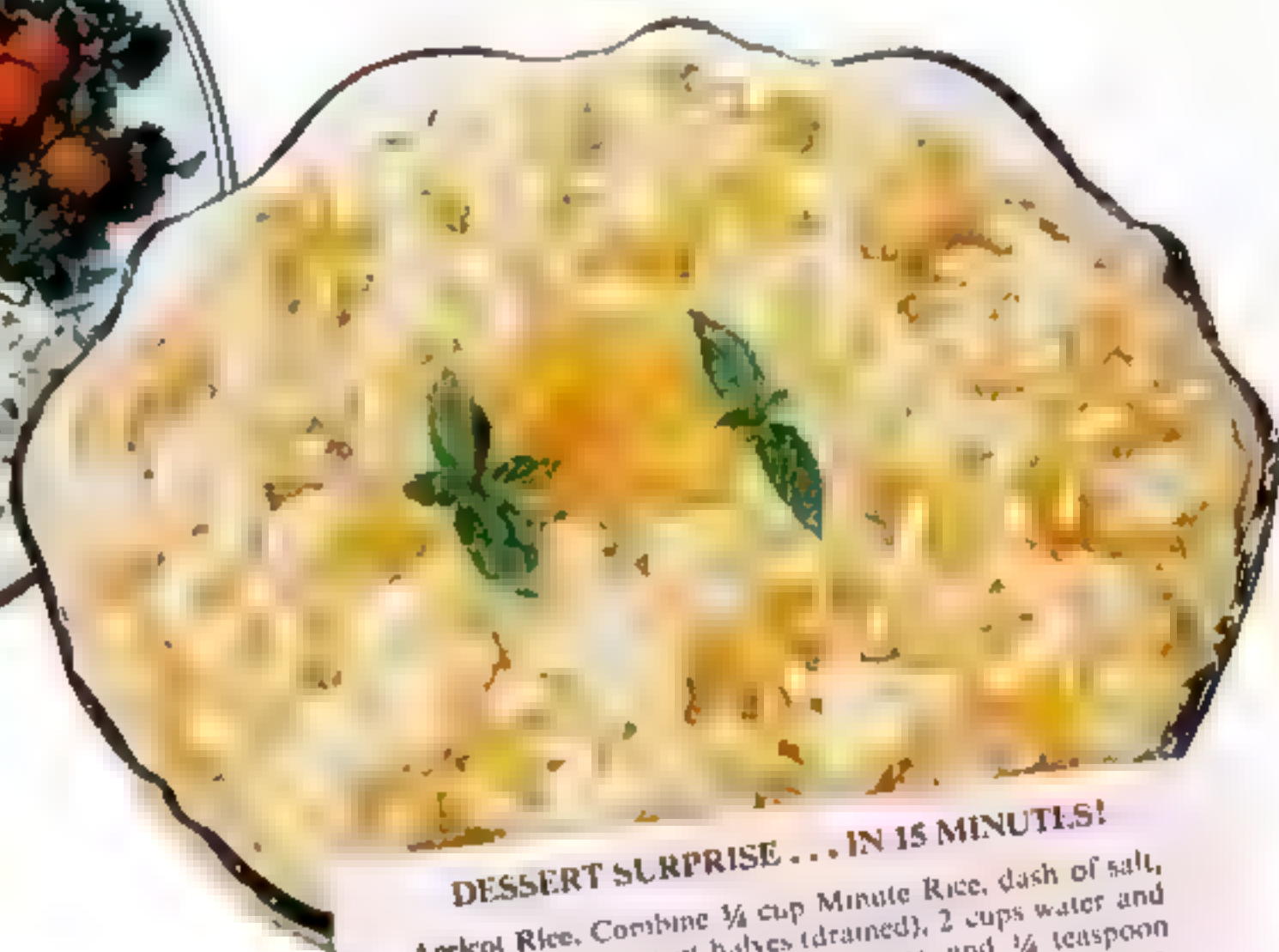


LEFTOVER-TURKEY HIT... IN 15 MINUTES!

Sliced Turkey Platter. What to do about the turkey left from your Sunday dinner? Turn it into a second banquet with quick-quick Minute Rice. Prepare 1 package (1½ cups) Minute Rice as box directs. Meanwhile, arrange turkey slices in the center of a hot platter. Season rice with butter and chopped parsley. Arrange around edge of platter. Garnish with whole cranberries and parsley. Your family will cheer this new turkey-and-rice combination — and it's a cinch for you with snowy, can't-fail Minute Rice!

Just bring Minute Rice to a boil! No other cooking required. So easy to prepare, it turns out snowy fluffy, delicious—every time!

What a boon to homemakers, this fabulous new Minute Brand product! Keep several boxes on hand, and you'll always be ready to turn out tempting meals at a moment's notice.



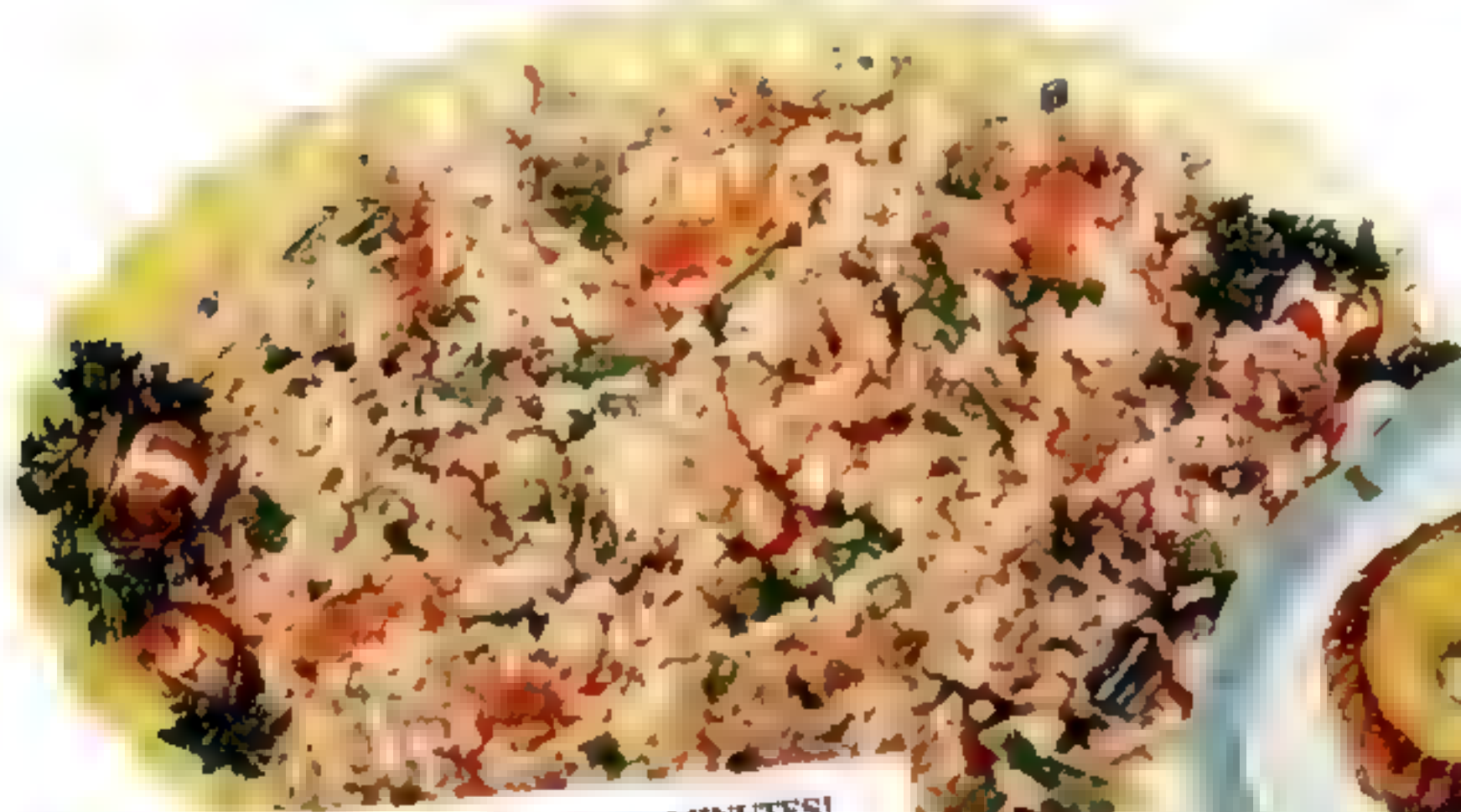
DESSERT SURPRISE... IN 15 MINUTES!

Apricot Rice. Combine ½ cup Minute Rice, dash of salt, 1 No. 2½ can apricot halves (drained), 2 cups water and apricot syrup, 1 teaspoon lemon juice, and ¼ teaspoon grated lemon rind in a saucepan. Bring to a boil, cover, simmer 5 minutes. Remove from heat and let stand 10 minutes. Add 1 tablespoon butter and cool. Chill slightly. Serve plain or with whipped cream — and discover a new taste thrill! Minute Rice absorbs all the heavenly apricot flavor — a luxurious trick no other rice can boast. Serves 6.

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TASTE-INGLING LUNCH... IN 18 MINUTES!

Savory Rice and Green Beans. Prepare 1 package (1½ cups) Minute Rice as box directs. Sauté ¼ cup finely chopped onions, ⅓ cup chopped celery, and ½ cup diced green pepper in ½ cup fat until tender. Add the rice, 3½ cups tomatoes, 2 cups cooked green beans, ¼ teaspoon salt, ¼ teaspoon pepper, and ½ teaspoon Worcestershire sauce. Simmer 5 minutes — and there's a grand lunch for 6 to 8. Minute Rice picks up the rosy-red color of the tomatoes, absorbs all the flavor and juices of the other ingredients.

COLD-WEATHER FEAST... IN 17 MINUTES!

Sausage and Minute Rice Dinner Plate. For a hearty, stick-to-the-ribs meal, you can't beat this Minute Rice quickie! Shape sausage meat into balls; sauté until done. Remove sausage and keep hot. Make gravy with drippings remaining in pan. Meanwhile, simmer apple rings in water for 2 minutes. Then cook gently in a syrup made of equal parts of sugar and water, until apples are tender. Prepare 1 package (1½ cups) Minute Rice as directed on package. Butter, serve with sausage balls, gravy, and apple rings.



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Alexander Smith

FLOOR-PLAN RUGS



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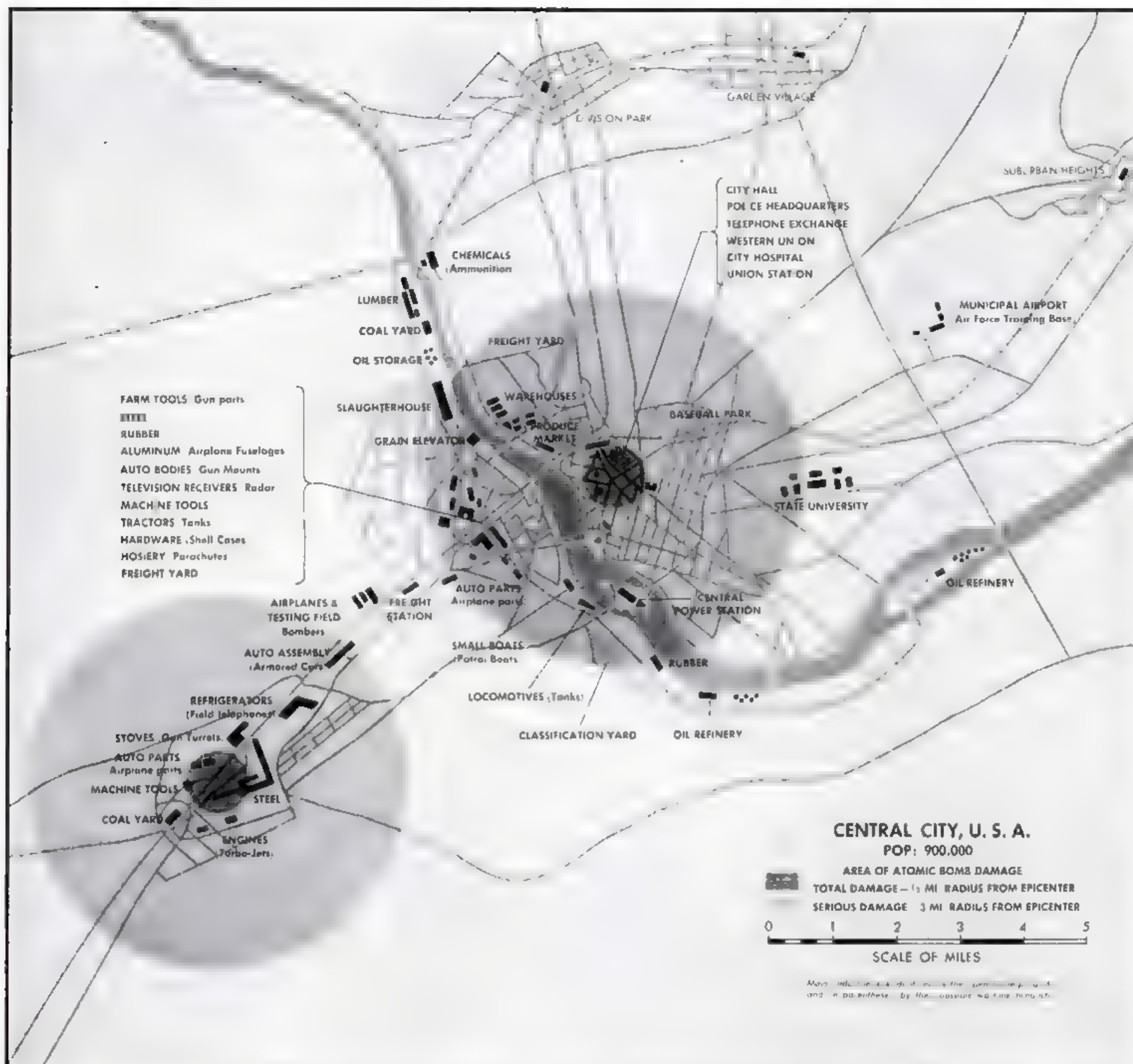
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the greatest cookie-baking company in the world! Buy such favorites as NABISCO WAFFLE CREAMS—the luscious wafer sandwich with creamy fondant filling—in cello-wrap. Shop at the NABISCO display in your store—the red NABISCO seal is your guide to America's best-loved cookies. ®



TWO ATOMIC BOMBS ON U.S. INDUSTRIAL CITY WOULD ANNIHILATE MILE-WIDE CENTERS (DARK-GRAY CIRCLES), WRECK AREAS SIX MILES ACROSS (GRAY CIRCLES)

A-BOMBS ON A U.S. CITY

AEC REPORT ON JAPAN SHOWS WHAT WOULD HAPPEN TO AN AMERICAN INDUSTRIAL CENTER UNDER ATOMIC ATTACK

What would happen to an average American city of 900,000 persons if it were struck by one or two old-fashioned atomic bombs? The U.S. Atomic Energy Commission and the Department of Defense answered that question recently in a report on bomb damage in Hiroshima and Nagasaki. The answer was: plenty. Without the help of its deadly by-products, heat and radiation, the bomb's blast alone could wreck a city of nearly one million.

To dramatize the AEC report, LIFE has created the mythical "Central City," shown in the map above, and has hit it with two Hiroshima-style atomic bombs. Central City is the prototype of many U.S. communities, with an industrial sub-

urb, a river and the usual concentration of government and communications. Its highly developed industry is easily convertible to war purposes, as the parentheses indicate. But it is vulnerable to the A-bomb because the industry is not dispersed. Only two A-bomb hits are needed to turn the city from a war-effort producer into a liability.

In the dark-gray-circled areas around epicenters (points where bombs burst) of the two explosions the bomb blast creates winds of 800 mph and nothing survives. This means, in the case of the civic center, not only the destruction of major buildings (pp. 82, 84), but elimination of vital services. In the lighter circles, many heavy framed steel and re-

inforced concrete buildings remain standing, but brick homes, factory sheds and warehouses are reduced to rubble as much as two miles from the epicenter. All of the factories in the industrial suburb are made inoperable by the explosion there.

In all the U.S. only a few California cities could hope to fare much better than Central City. The AEC found earthquake-proof design helped and that homes of sturdy wooden frame construction survived better than brick. But this was a matter of degree, and since the Hiroshima-Nagasaki bombs are now "obsolescent," it was hardly surprising that many Americans, confronted by the hydrogen bomb, were looking for a hole to hide in (p. 89)



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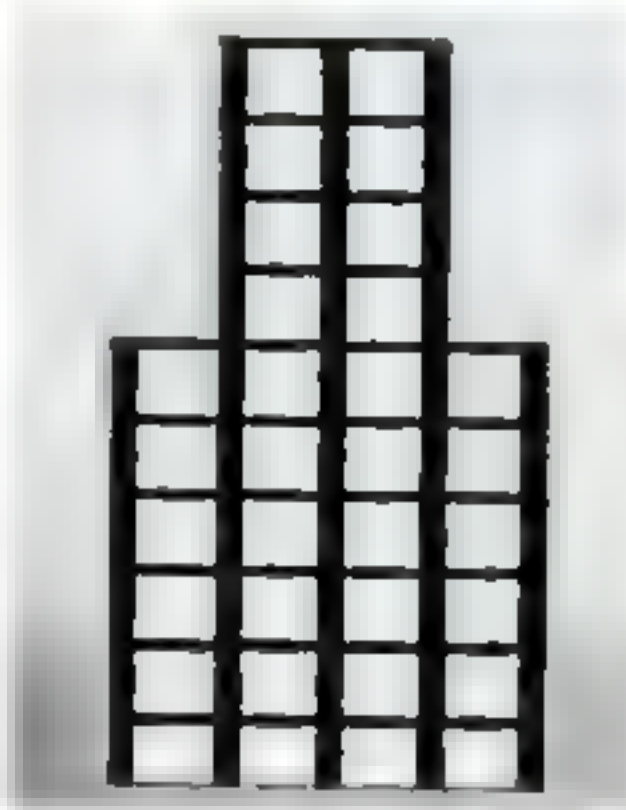


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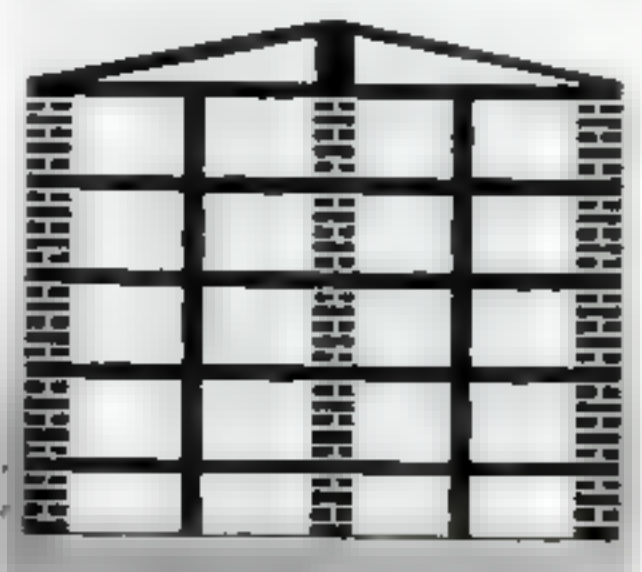
A STEEL GIRDER BUILDING STANDS AFTER BOMB BLAST

In Hiroshima the seven-story building in the background was gutted and its windows were blown out by the atomic bomb, but its steel framework did not crumple. The AEC investigators found that such steel-framed buildings (*diagram, left*) could withstand the blast at a distance from epicenter of 6,000 or more feet. Within 1,000 feet of the explosion even heavy girders were twisted as grotesquely as the light frames which are shown amid rubble in the foreground above.



A BRICK-WALLED BUILDING WAS PUSHED OFF ITS BASE

The AEC found that buildings built of brick offered poorer resistance to the bomb shock wave than the girder type. However heavy brick walls aided by a cantilever roof (*diagram, left*) held up fairly well, as in the case of the building above which did not crumble although picked off its base. Structures in which upper floors depended on brick walls for support flew apart as far as 8,000 feet from the epicenter. Round forms like pole (*above, right*) and smokestacks were affected least.



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HEADACHES
ACID INDIGESTION
MUSCULAR PAINS

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CONTINUED ON PAGE 81



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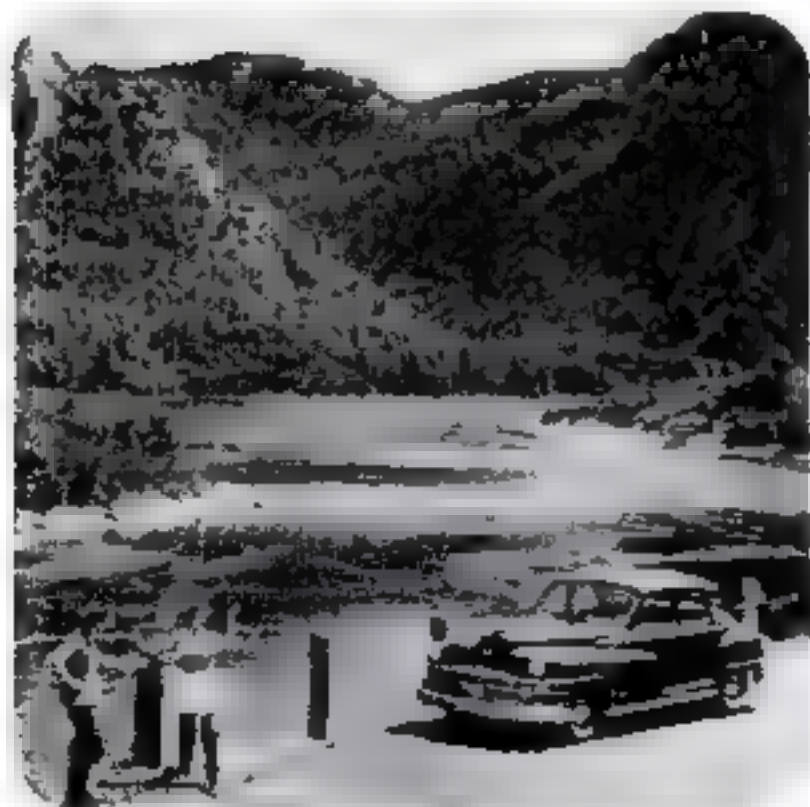
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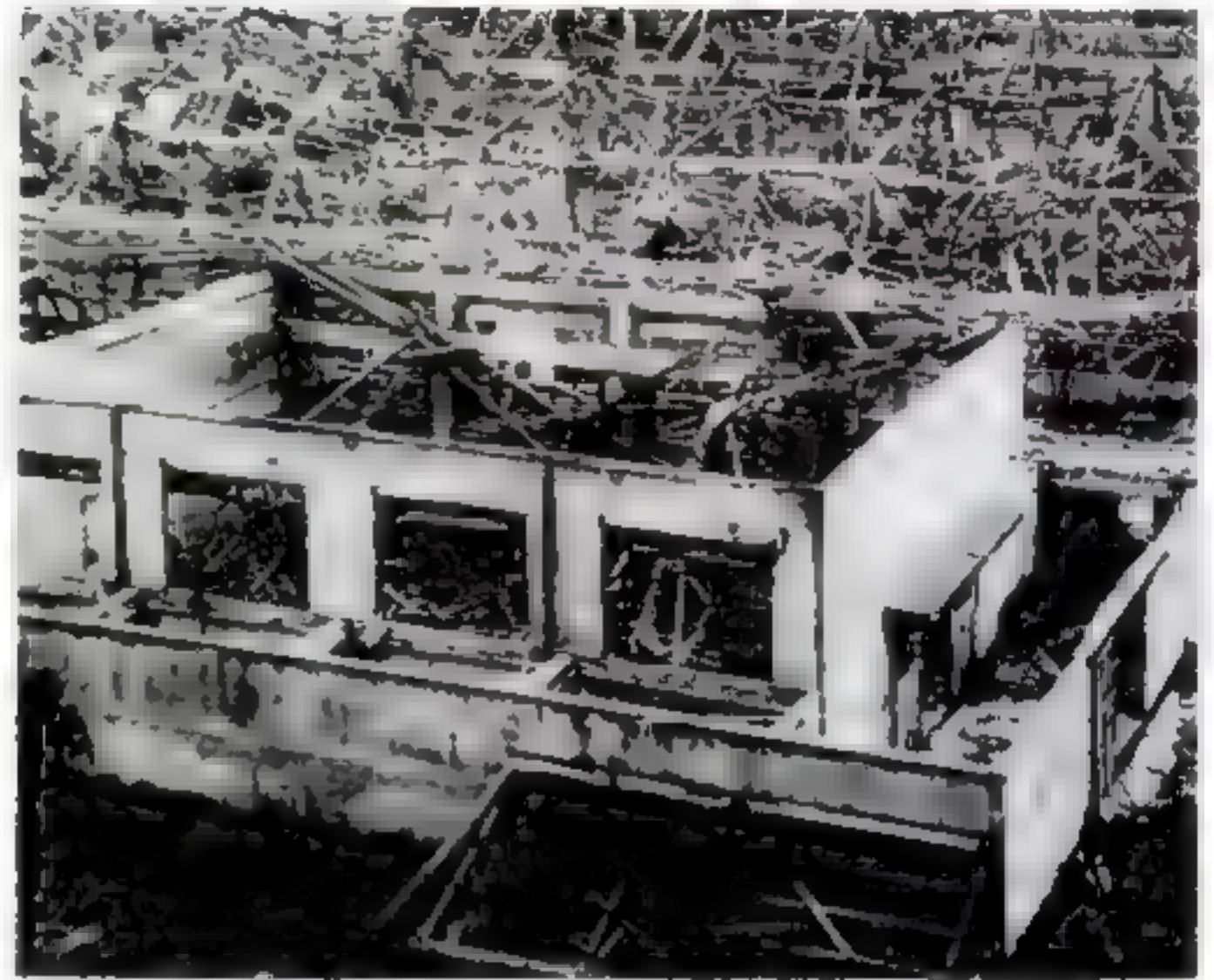
Go-as-you-please along highways which lead to the unspoiled, uncrowded outdoors.



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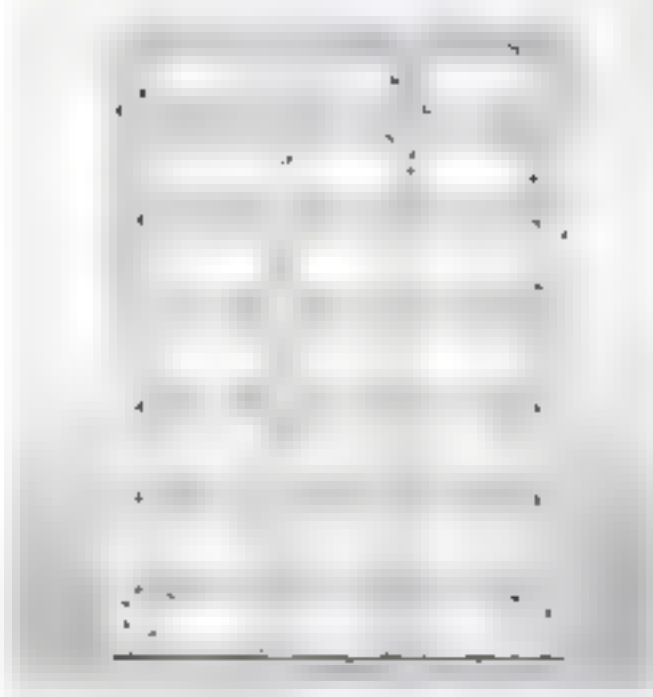


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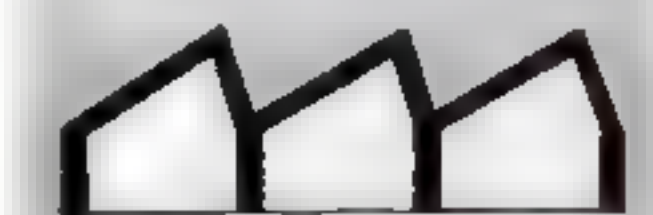
IN REINFORCED CONCRETE BUILDINGS, WALLS STOOD

The roof of the Hiroshima Municipal Office Building disappeared under the bomb blast, exposing the gutted auditorium, but the windowless walls remained standing. The AEC found that multistory buildings made of concrete, reinforced by steel and designed to survive earthquake shocks, weathered the atomic blast comparatively well. In the drawing at the left, the thickness of the walls has been greatly exaggerated to show the method that is used in steel reinforcement.



SAW-TOOTHED STRUCTURES WERE STRIPPED OF WALLS

Modern factories in the Nagasaki area employing the saw-tooth roof design (left), which is popular with manufacturers in the U.S., failed badly at great distances from the blast center. The buildings shown in distance were more than 10,000 feet from the explosion's epicenter, yet lost both their roofs and walls. At closer range such buildings were simply pushed over and smashed. The AEC report said U.S. factories of saw-tooth design "probably would fare no better than those in Japan."



CONTINUED ON PAGE 13

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*Just for fun
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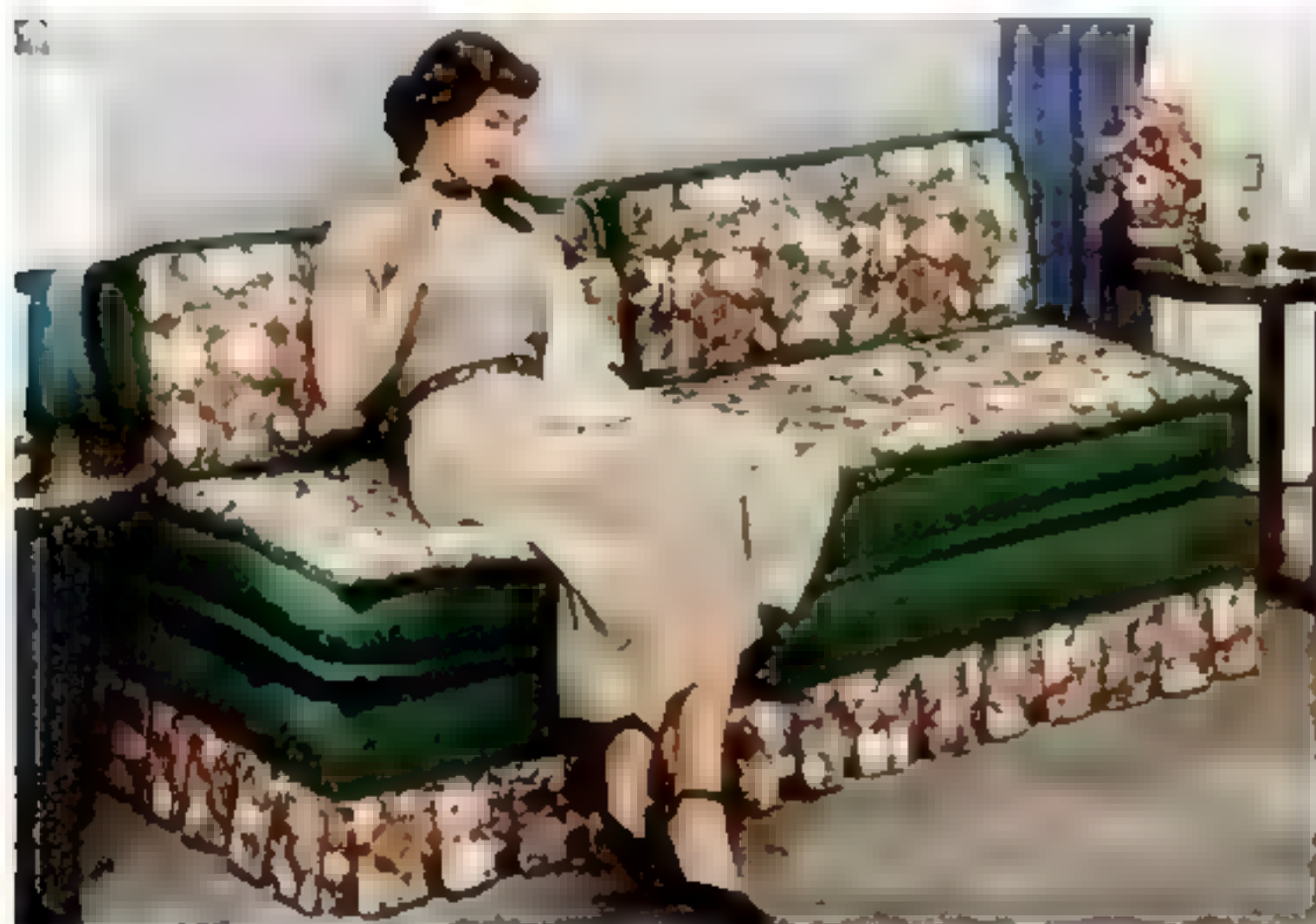
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This luxurious sofa opens into a full-size bed with a full-thickness innerspring mattress! \$249.50 Or, with a genuine Beautyrest, \$269.50 (Same design in 2½-size sofa, \$239.50. With a Beautyrest, \$259.50.) Prices slightly higher west of the Rockies.



Beautyrest* Twin Studio Couch—Here's beauty by-day and blessing by night! You'll be proud of its colorful good looks—plain and figured fabrics combine with harmonizing moss edging to make it a decorative high-spot in a room.

And you'll welcome the solid sleeping comfort it gives two people! The top pad has pocketed coils like those of the famous Beautyrest mattress! \$119.50.



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When it's time for sleep, tilt the back to release automatic latch—take bedding out of storage compartment under seat—and it's ready. Only \$99.50.



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If you've got one room when you need *two*...

If your living room has to do double duty as a bedroom...

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Simmons has a wonderful new answer to your

problems! The exciting new Simmons Space Saving Show will show you space-doubling, *glamour-doubling* ideas you'd never have dreamed possible.

Never have you had such a choice of wonder-workers—superbly styled decorator pieces, sofas and studio beds. And all these daytime beauties become fine, comfortable beds—at a touch!

See them all! Pick the style, the size, and the fabric that's perfect for your home.

They're priced for what you'd pay for *just a sofa* of similar quality. Convenient time payments are easy to arrange.

Watch for your dealer's announcement of the Simmons Space Saving Show. Every leading furniture and department store will feature it!



Simmons Studio Couch—This studio couch is a real decorative asset in *any* room. You'll love its colorful floral print covering combined with solid color, its trim box pleats, and moss fringe hanging.

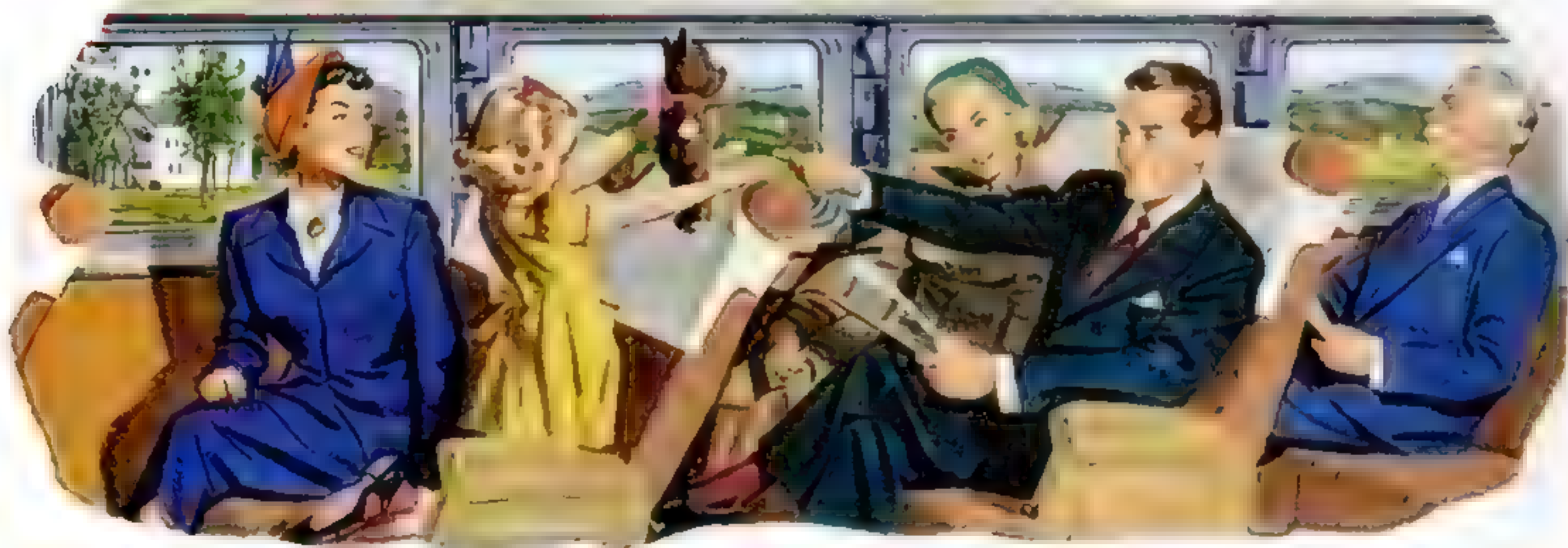
It has a comfortable innerspring mattress and it makes a wonderful bed for one person. (This smart corner arrangement will give you twenty per cent more usable space.) Priced at just \$49.95 each.



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Bomb Damage CONTINUED

SIGNS OF TIMES IN ATOMIC AGE

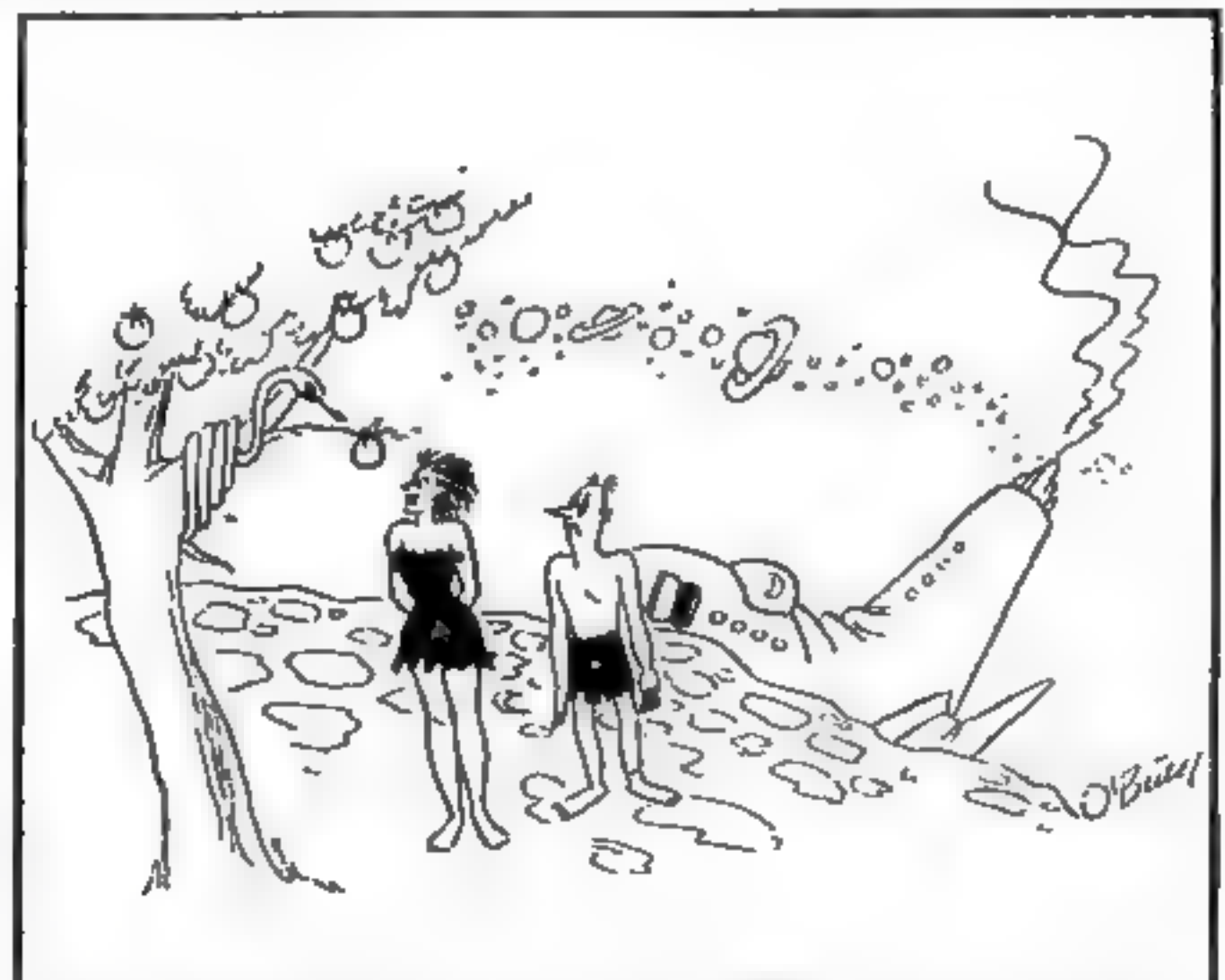


ATTACK ON NEW YORK, with enemy ship dropping the hydrogen bomb for an underwater explosion, is shown in this drawing based on warning by Dr. Harold C. Urey of the University of Chicago, Nobel prize-winning chemist.

SECLUDED 15 ACRE ESTATE on fair sized lake beyond Luzerne, 25 minutes from Saratoga. Large well furnished and equipped main house, 4-room guest house, large garage, accessory buildings, woods, gardens, boats, fishing, swimming. Good bomb immunity. Attractive summer home or could be converted for resort or institutional purposes. \$30,000.

Box H 70, The Wall Street Journal.

FLIGHT FROM NEW YORK is proposed as a solution by an advertiser in *The Wall Street Journal* who cites "good bomb immunity" as an inducement. Government is advising seaport industries to move inland and decentralize.



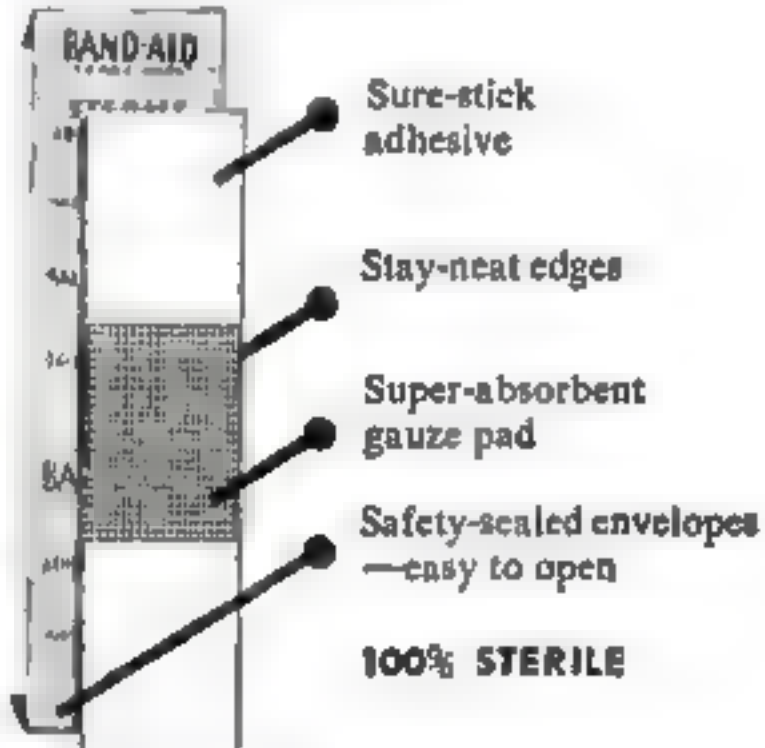
SHAPE OF THE FUTURE is wryly forecast by *The Vet Times*, a veterans' newspaper published in Washington, which captioned this cartoon: "Here we go again." Wrecked space-ship represents attempt (and failure) to flee earth.

Never neglect a barked shin



The tiniest injury can become infected. Never take a chance!

Always use **BAND-AID**... the only adhesive bandage that gives you all this protection:



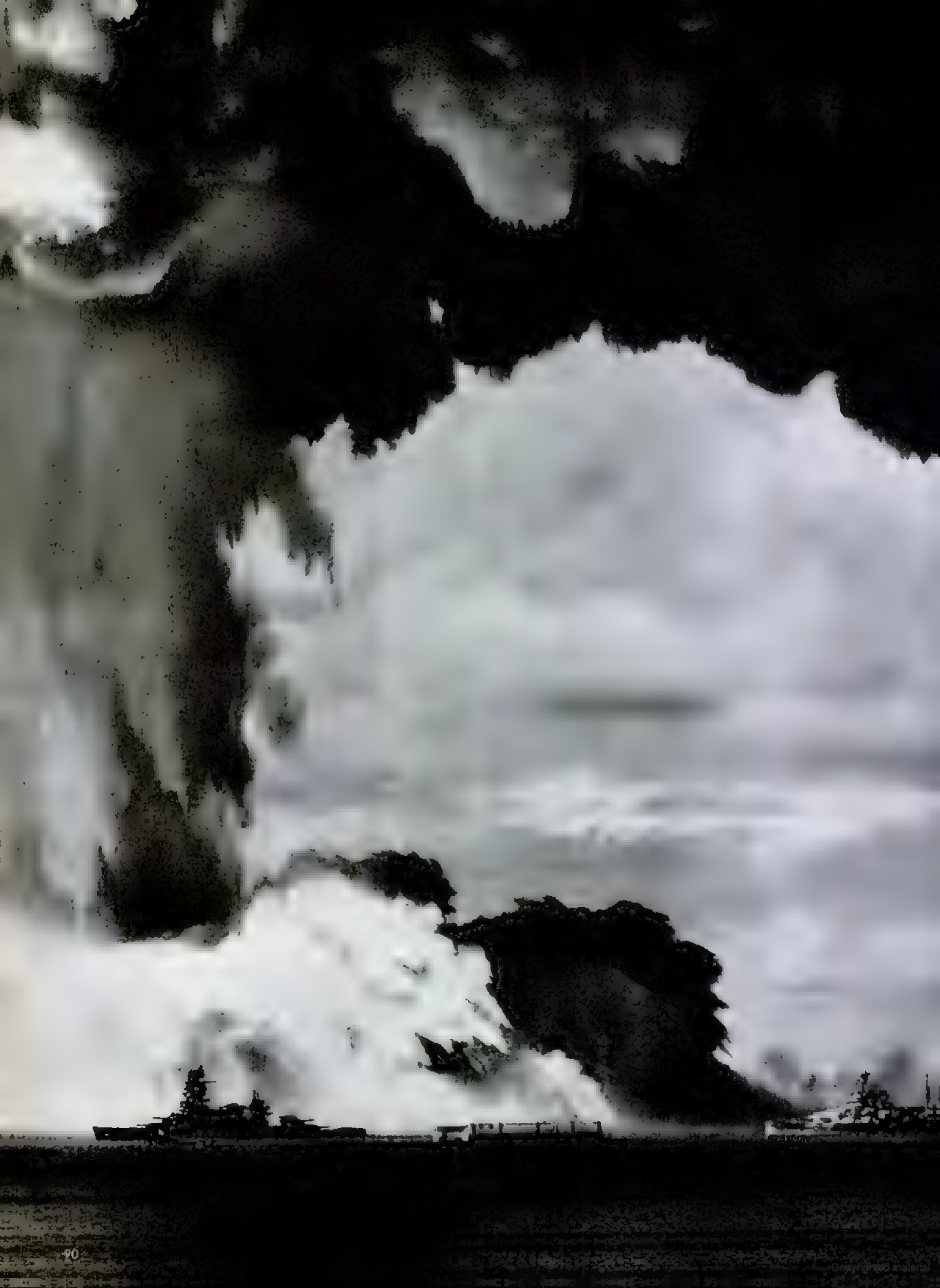
Caution: Not all adhesive bandages are BAND-AID. Only Johnson & Johnson makes BAND-AID—the brand that is 6 to 1 choice in doctors' recommendations.

Always look for the name on the box



*BAND-AID MEANS MADE BY

Johnson & Johnson



THE ATOMIC BOMB

HOW WEAPON THAT LAUNCHED A NEW AGE WAS PRODUCED;
HERE IS WHAT AMERICANS CAN AND MUST KNOW ABOUT IT

This article, the second in LIFE's series on atomic energy, is the story of the bomb itself. Its purpose, like that of the first article, "The Atom" (LIFE, May 16, 1949), is to make public the information that Americans must have in order to think clearly in an atomic age. Necessary security and unnecessary secrecy obscure many aspects of the U.S.'s atomic weapons program, but enough have been officially released to give an over-all picture of this gigantic federal undertaking. This article reveals no secrets. It is based on published, unclassified material that can be found by anyone, including the Russians, in public libraries.

THERE is nothing that the average person needs to know about the atomic bomb which is too complicated to be understood or too secret to be stated. Two kinds of information are necessary: first, about the scientific basis of the bomb; second, about the way in which it is produced.

The most fundamental of the scientific facts, presented in LIFE's article "The Atom," are briefly these: all matter is composed of elements, the basic substances of the universe. Each element is made up of atoms of a particular kind which are structurally different from atoms of other elements. The atoms themselves consist of three kinds of particles: protons and neutrons, which form a nucleus; and electrons, which circle around it. The difference between the atoms of one element and those of another is in the number and arrangement of these particles. This structural difference is the basis of the master plan of matter, the modern periodic table.

This much was known 15 years ago. The physicists of 1935 understood the structure and properties of most kinds of atoms. They had discovered that the heaviest of them were unstable and could produce mild energy in the form of radioactivity. They also knew that there was a great binding force in the atomic nucleus which, if it could be released, would be a far greater source of energy. But no one knew how to release it. Then, in 1939, two German scientists discovered that a uranium atom could be made to split under the bombardment of a stream of neutrons and, in splitting, to release some of its nuclear energy. This splitting, or fission, was the process which was to make chain reaction and atomic explosions possible (*next page*). The German discovery was confirmed by scientists throughout the world. Within a few months experiments had progressed so far that on Aug. 2, 1939, Albert Einstein, acting as spokesman for the nuclear physicists, informed President Roosevelt that a uranium bomb could almost certainly be built in the immediate future. "A single bomb of this type," he wrote, "carried by boat and exploded in a port, might very well destroy the whole port together with some of the surrounding territory."

By 1943 the atomic project had progressed from laboratories

to pilot plants. A year later it was an immense industrial operation. The complicated problems of plant engineering were solved. The technology of large-scale bomb production was established. And the free discussion that had accompanied the original scientific research was cut off by the curtain of military secrecy which has veiled it ever since.

For the past five years the operations and results of the U.S. atomic weapons program have been almost completely unknown to the public. The critical facts about this greatest of all publicly owned enterprises have been withheld, partly because of essential security restriction. But a larger factor behind the present state of public ignorance is the extension of secrecy far beyond the limits of true security.

This growing disparity between required security and officially imposed secrecy has recently come in for sharp criticism by many of the country's best-informed observers. Joseph and Stewart Alsop, writing about the world strategic situation and the H-bomb, say, "what the President has said [about the bomb] is not one third, or one tenth, of what it is his bounden duty to say." Hanson Baldwin, in the *New York Times*, writes: "facts are the foundation of democracy—and facts we do not have." Physicist J. R. Oppenheimer, in a recent television interview, (*pp. 37, 38*), pointed out that wisdom and truth cannot flourish without the give-and-take of debate and criticism, and added that "the facts [about atomic energy] are of little use to an enemy, yet they are fundamental to an understanding of the issue of policy."

The extent of public information about atomic weapons must of course be limited. It cannot and should not include a knowledge of facts that could conceivably be of use to an enemy. It should, but—for reasons of specious security—does not at present include all the facts that are useless to an enemy or known to him. But despite these existing limitations, public information can and should be substantially increased. This can be done by culling the facts that have been officially released in documents like the famous *Smyth Report* and presenting them in an understandable form. That has been LIFE's procedure and purpose in the preparation of the article presented in the following pages.

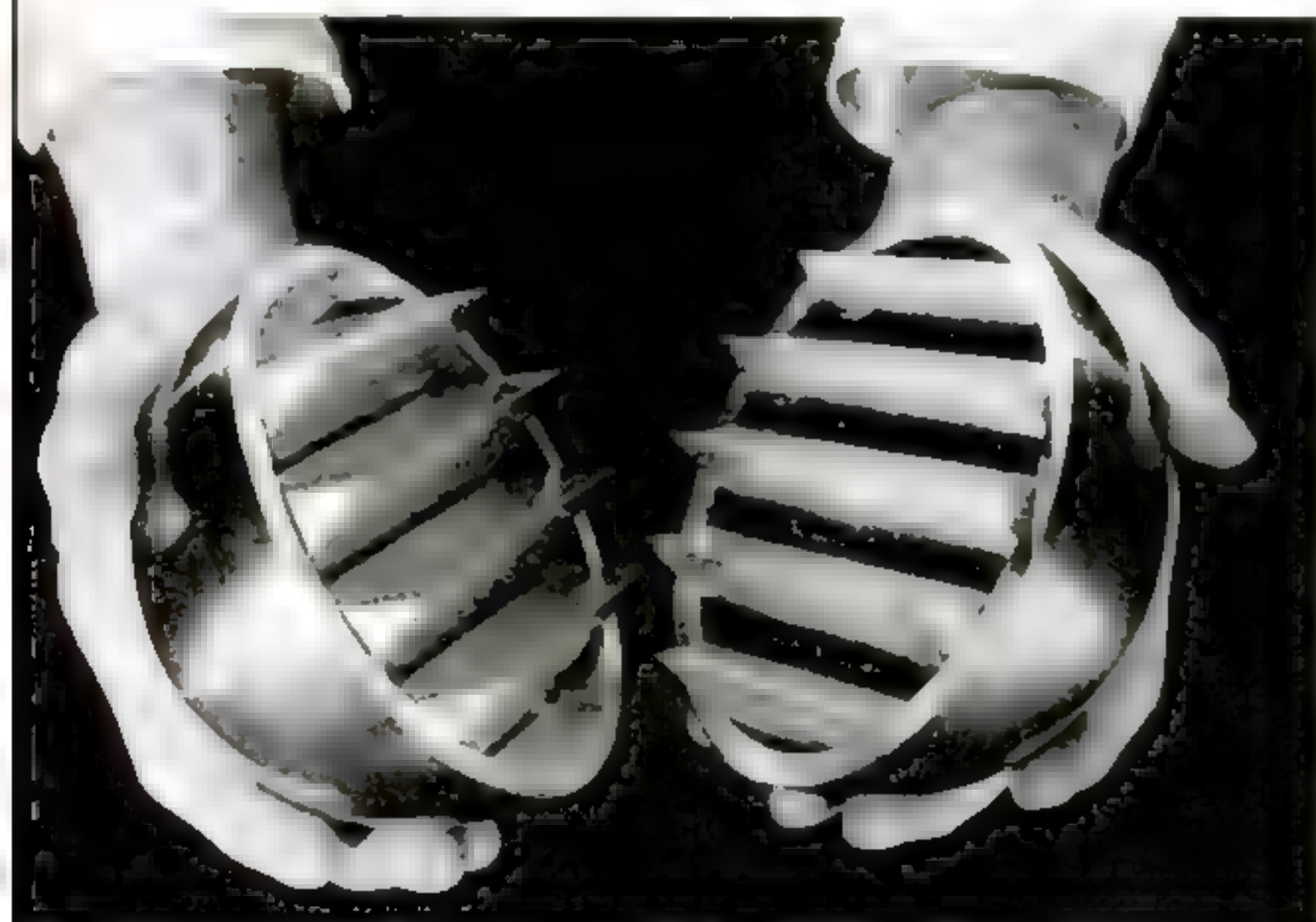
← **A MILLION TONS OF WATER**, kicked out of Bikini lagoon by an atomic blast, spread a radioactive canopy over dwarfed forms of two battleships.



ISOTOPES DIFFER IN WEIGHT: each flask (above) holds same amount of water, but one at left is heavier because it contains heavy water, which is made with a heavy isotope of ordinary hydrogen. Heavy hydrogen atom has neutron added to nucleus.

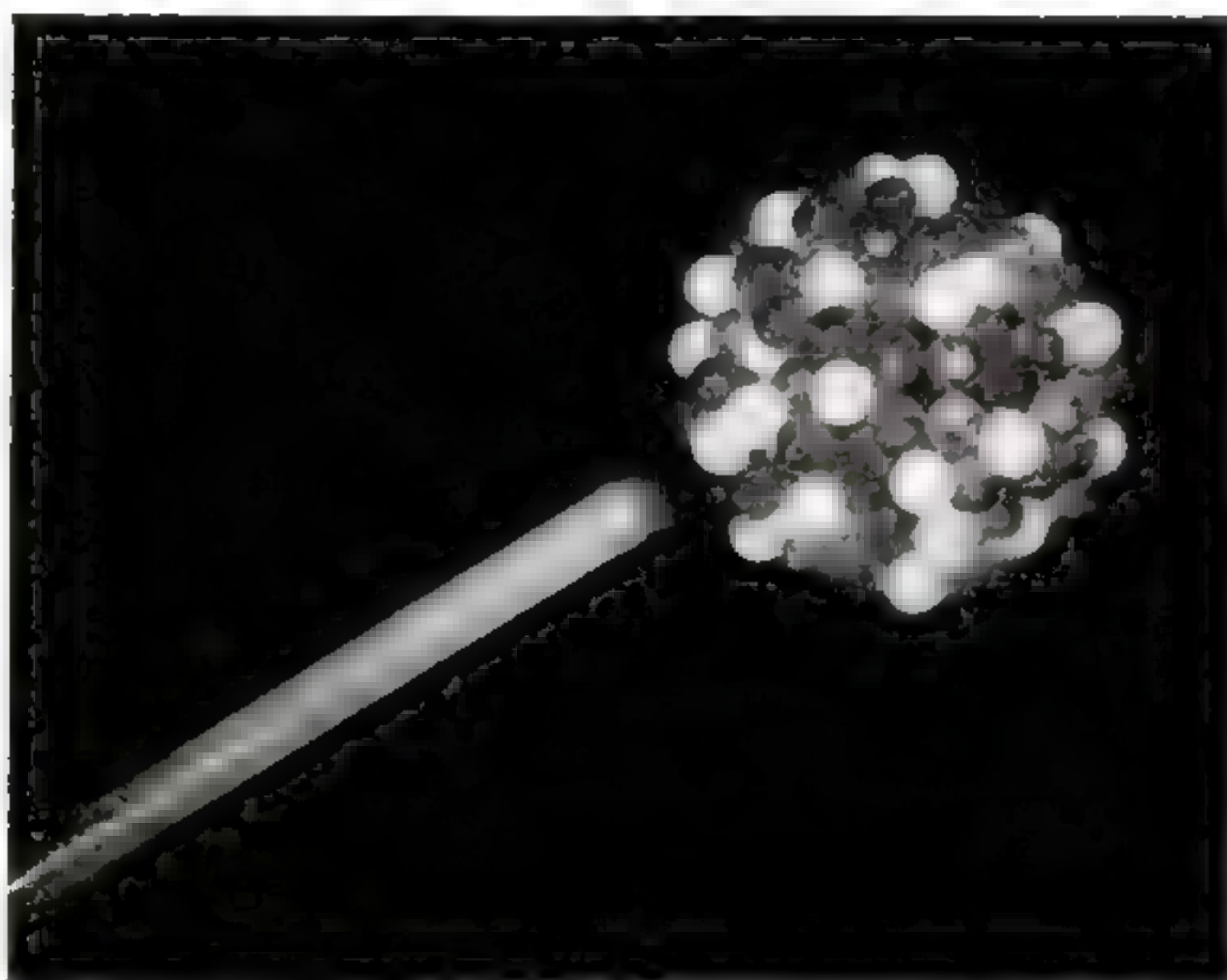


ISOTOPES DIFFER IN RADIOACTIVITY: ornaments made of silver—normally a stable element, become radioactive after bombardment in a cyclotron. Bombardment changes some silver to unstable isotope. Rays have exposed film on which ornaments lay.



A-BOMB'S EXPLOSIVE COMPONENTS are represented by these two aluminum hemispheres. Bringing together two such masses of U-235 or plutonium, machined to fit perfectly, would produce a quantity larger than the critical mass and cause an explosion.

ATOMIC BOMB CONTINUED



FISSION BEGINS when single neutron collides with nucleus of U-235 or plutonium (model above) and is absorbed. New nucleus is so unstable it flies apart, releasing 200 million electron volts of energy. Demonstrations were prepared at Columbia University.

BOMB'S POWER COMES FROM ATOMIC FISSION

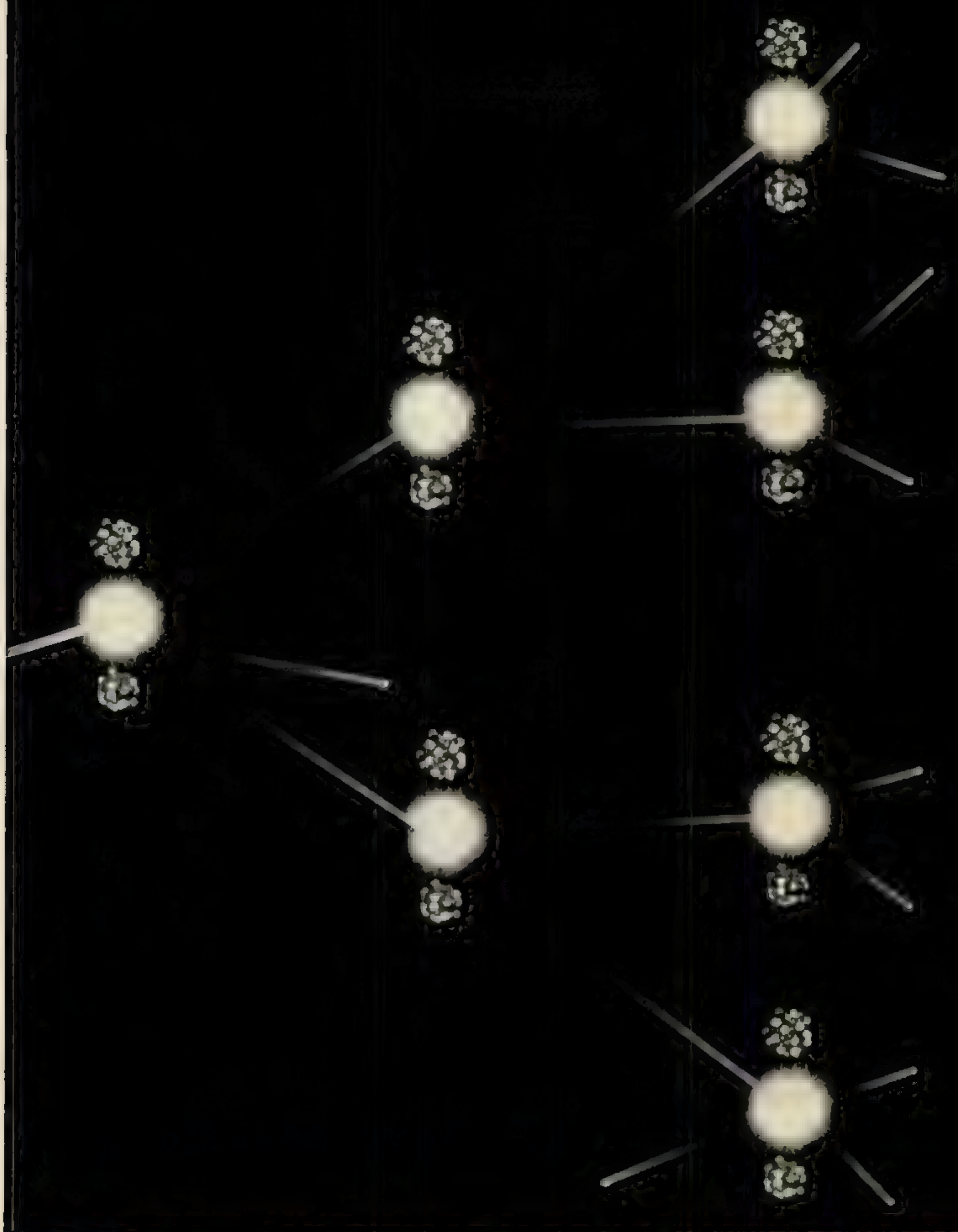
The immense power of atomic weapons derives from the process of fission, in which an atomic nucleus is split and some of its binding force released. Fission can be produced only in the heaviest elements whose atoms break into smaller fragments when they are struck by stray high-speed neutrons. As each atom splits, a minute amount of its original mass is converted into an enormous burst of energy. At the same time the fission fragments throw out two or three neutrons, and each of these neutrons goes on to strike and split another atom. This is the process of chain reaction (*opposite page*) whereby one fission causes two more fissions, those two four more, those four eight more, etc. The total reaction is so fast that all the atoms in a mass of readily fissionable material can disintegrate in a fraction of a second and release their energy almost simultaneously.

Of the several known kinds of fissionable material, only plutonium and one kind of uranium, U-235, are suitable for use in atomic bombs. The rest do not fission readily enough to sustain the violent chain reaction required for atomic explosions. But the difficulty of producing these two is so great that they have become the most precious substances on earth.

The problems involved in obtaining U-235 stem from the fact that this explosive metal is not ordinary uranium but a very rare form of that element. Most elements in nature occur in a number of different forms, which are called isotopes. The isotopes of any given element are all identical chemically; they differ only in weight and in radioactivity. U-235 is an isotope of the element uranium and therefore it cannot practically be separated from it by any chemical process. It is extracted by the so-called gaseous diffusion method (*pp. 98, 99*) in which its physical difference in weight from ordinary uranium (U-238) is used as the basis of separation.

Plutonium is as hard to produce as U-235, for though it is a separate element rather than a rare isotope, it is one of the few elements which are almost non-existent in nature. It is created from natural uranium when a neutron from a splitting atom of U-235 collides with an atom of U-238. The U-238 atom absorbs the neutron and then is transformed into the new element, plutonium. To build up even so much as a measurable amount of plutonium in a piece of uranium, it is necessary to keep up a high rate of fission among the U-235 atoms that are scattered throughout it. This is done in a pile (*pp. 94, 95*) in which a controlled chain reaction is set up to produce the large supply of neutrons necessary to transform U-238 into plutonium.

Both plutonium and U-235 are fissionable, but neither of these substances will explode unless a considerable mass of it is assembled. For if the mass is too small, a great many neutrons escape without hitting and splitting any atoms and a chain reaction is impossible. For this reason an A-bomb requires at least a minimum amount or critical mass of fissionable material to explode at all.



CHAIN REACTION begins when one atom in a mass of U-235 or plutonium (*extreme left on photo-diagram*) fissions, emitting two or three high speed neutrons. The escaping neutrons collide with neighboring nuclei, producing additional fissions (*middle row*).

The newly disintegrating atoms release more neutrons that go on to split more atoms in a chain reaction which, if unchecked, can build up to a full-scale atomic explosion. When it is properly controlled, the chain reaction can be made to run an atomic pile.

PLUTONIUM IS PRODUCED IN ATOMIC PILES

The manufacture of plutonium for atomic bombs, carried on at the great Hanford works (pp. 96, 97), involves two major steps: the "cooking" of uranium rods in a pile (right) and the chemical extraction of the plutonium which the cooking produces in the rods (below).

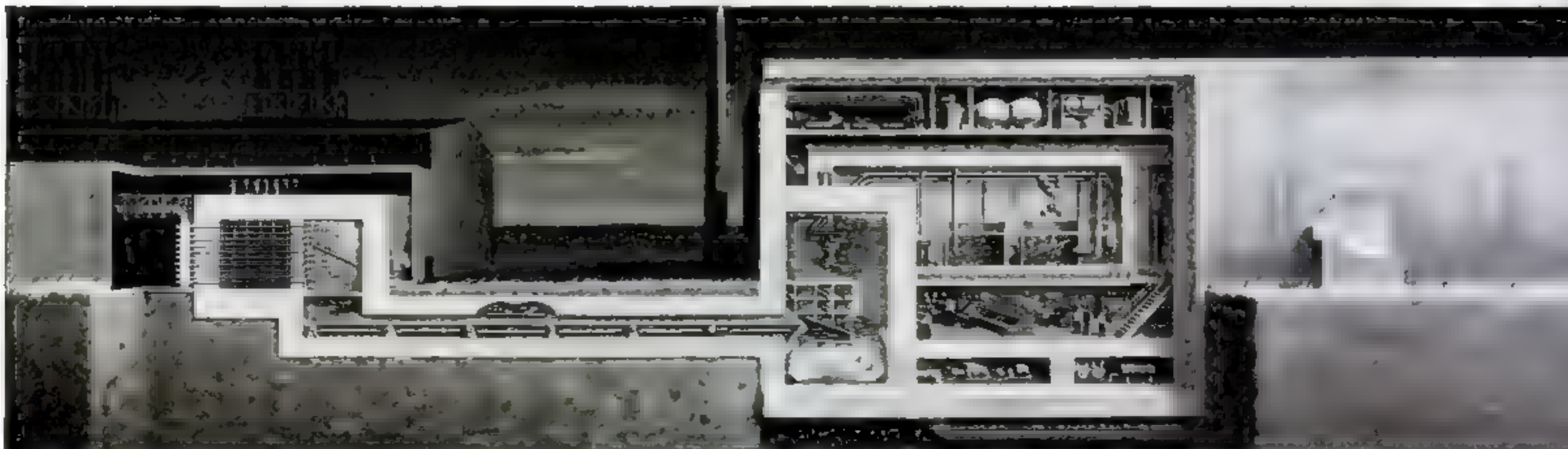
The piles in which uranium is treated are gigantic blocks of graphite, honeycombed with aluminum tubes. In these tubes are placed slender rods of natural uranium, which contain about 99% U-238 and 1% U-235. Fission occurs spontaneously in a few of the U-235 atoms in the rods, and each fission throws out two or three neutrons moving at high speed. Normally (that is, when the rods are not in a pile) these fast neutrons are either absorbed by the U-238 atoms around them, which are thus converted into plutonium, or stray out of the rod into the air where they are lost. The reaction stops, for there are no more neutrons to keep it going. But in a pile the neutrons are slowed down as they pass through the surrounding graphite. By the time they come to other rods of uranium they have lost so much speed that only part of them are taken out of circulation by becoming embedded in U-238 atoms. Those that remain also strike atoms of U-238, but because of their low velocity they hit lightly and bounce off to travel through the pile until they strike and split one of the rare U-235 atoms. This fission releases two or three more neutrons. In this way a controlled chain reaction builds up, with some neutrons making U-238 into plutonium and others causing the fission needed to keep the reaction going.

If this process of continuous fission were left uncontrolled, it could build up to the point where the uranium in the pile might melt. To prevent this, long rods of cadmium are lowered into the pile where they soak up neutrons and thus slow the operation. Any desired level of activity can be obtained by raising or lowering these rods.

The reaction proceeds until most of the U-235 atoms have been split. At this point the uranium rods, now highly radioactive, are removed and sent through a water-filled tunnel to the "canyons"—the separation plants—where they are dissolved in acid. The small amount of plutonium contained in each is then separated out and sent in pure form to the weapons laboratories at Los Alamos, N. Mex.

AN ATOMIC PILE is shown above in a semi-imaginative cutaway drawing based on descriptions contained in the *Smyth Report* and published sketches. Actual piles

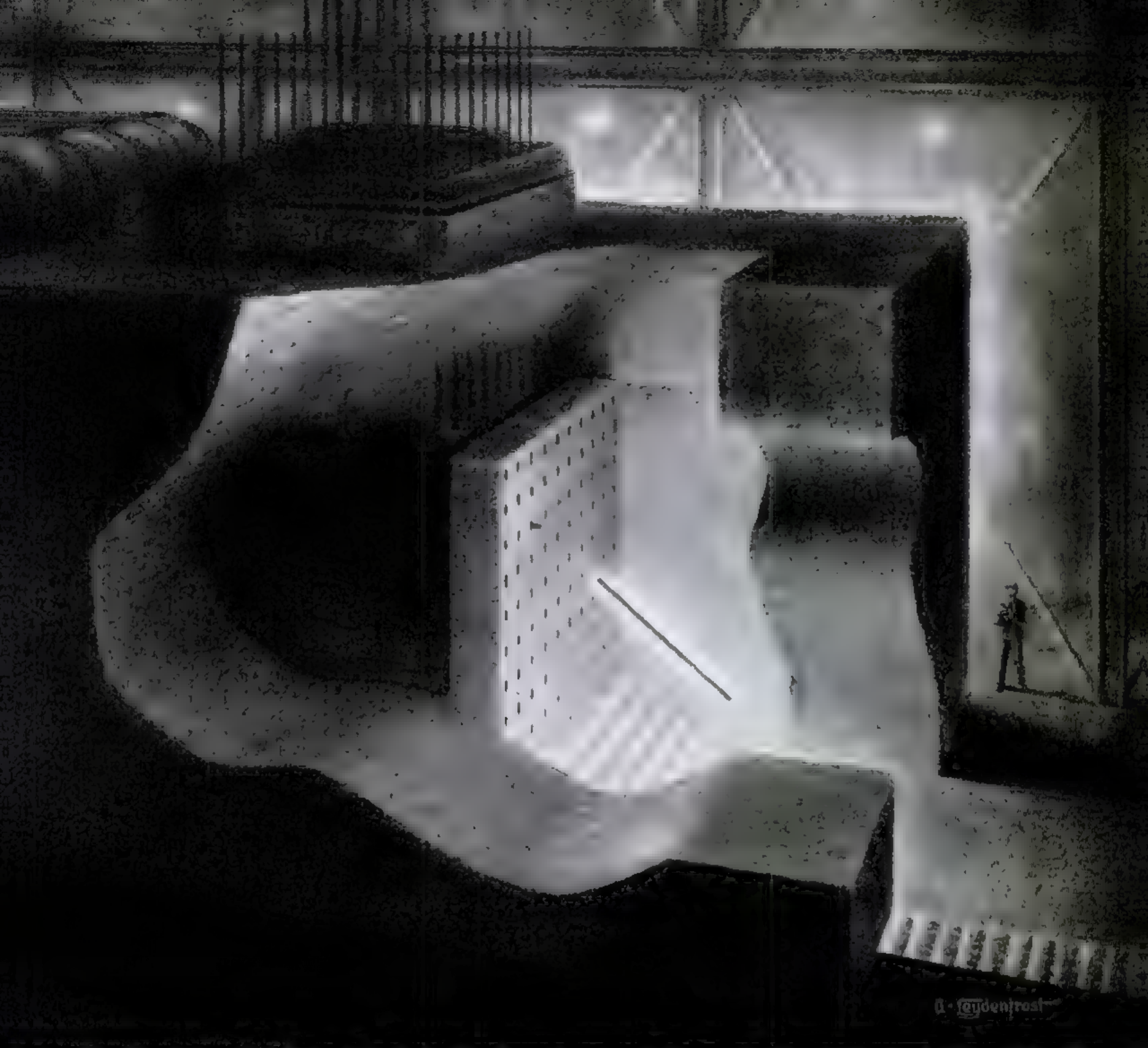
are similar to this one in their main elements, but different in most details. Graphite cube of the pile itself is surrounded by a heavy wall of concrete to contain dangerous



PLUTONIUM PRODUCTION, from pile to separation plant, is outlined in this highly schematic drawing.

Actual processes inside the canyon are not known, and all details are completely conjectural. Highly radioactive

rods are shown emerging from the pile at left, then passing through a tunnel (actually several miles long) into the



radioactivity. Water, which is needed in vast quantities to cool the pile, comes in through large pipes like those at left and then flows through aluminum tubes that contain

the rods. When rods are ready to be removed, they may be pushed out of the pile by a mobile ram something like the one shown at left, which also pushes new rods in. Con-

veyor (lower right) carries rods away to separation plant. The cadmium rods which are used to control the intensity of the pile are shown here protruding from its top.



canyon. Here they are placed in vats of acids to dissolve. The resultant solution goes through a number of different

processes, all of which are carried out by remote control. Fluid radioactive wastes go out of the canyon into spe-

cial storage tanks, some underground, some on the surface (right). "Hot" gases are released through tall chimney.



THE HANFORD PLANT, where all the plutonium for A bombs is produced, stretches for miles along the valley of the Columbia River north of Richland, Wash. This drawing, which gives a general impression rather than the exact layout of the site, is based on the following published facts: 1) that the plants are located between 25 and 40

miles from Richland (General L. R. Groves in *The Military Engineer*, June, 1946), 2) that the buildings are placed several miles apart (*Smyth Report* Chap. 8, par. 51). The appearance of the buildings (whose size is here exaggerated for clarity) and the proximity of the pile areas to the river are known from photographs which have been published

by the government. The number of pile areas and corresponding separation plants is presumably six. General Groves, in the magazine article mentioned above, referred to five production plants then in operation at Hanford, and a few weeks ago the Atomic Energy Commission announced the completion of an additional pile. Each pile



© Sydney Frost

and its separation plant form a single unit which operates independently of all the others. The pile area contains a number of structures including the pile itself (large central building with elaborate superstructure); pumping and filtering plants to handle the millions of gallons of water required daily to cool the pile; and large, pondlike

retaining basins in which the slightly radioactive water that has passed through the pile is kept until it can safely be returned to the river. The separation plant, to which the uranium rods are sent underground after they have been "cooked" in the pile (pp. 94, 95), is several miles away. (Only five of the six separation plants are shown above.)

The long, low building in each separation plant is the semisubterranean canyon where rods are dissolved and their plutonium content extracted. Near each canyon is a pool to which some of the fluid radioactive wastes formed during the process are pumped. Gaseous wastes are released from tall chimneys when the wind is right.



A. Sydney Frost

THE K-25 PLANT is a low, half-mile-long structure. Its external appearance is known from aerial views that have

been published, but the details of its construction (such as the odd objects on its roof) and of its interior layout

have never been revealed. However, some facts about its intricate operation have been disclosed. The multi-stage

K-25 PLANT AT OAK RIDGE PRODUCES U-235

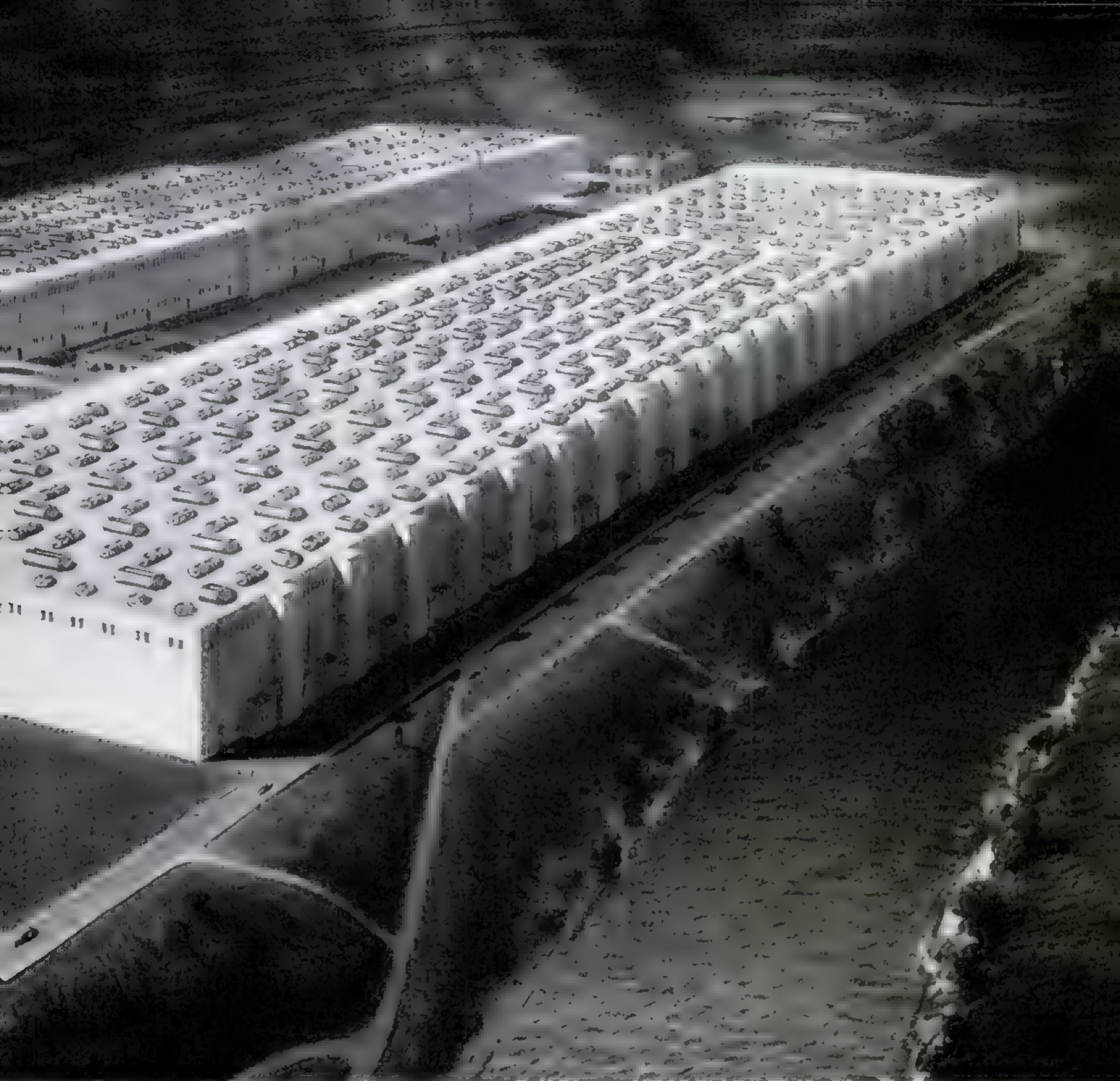
Part of the nation's supply of fissionable material for bombs comes from the Hanford piles; the rest is produced in a city-sized building, cryptically called K-25, which sprawls across a broad valley near Oak Ridge, Tenn. Unlike the production piles, which use the small amount of U-235 present in ordinary uranium to create the fissionable element plutonium, K-25 separates the U-235 itself from its more common twin. Since U-235 is an isotope of uranium (pp. 92, 93) it has the same chemical properties as U-238; and therefore it is almost impossible to separate the two chemically (as plutonium is separated from uranium). The only physical difference between them is weight, and it is this difference that

makes possible the gaseous diffusion process which is the basis of the K-25 operation.

In the gaseous diffusion process, uranium metal, including its .7% of U-235, is made into gas. This gas is pumped into one end of a chamber which is divided in two by a thin porous barrier, a kind of atomic sieve which is pierced with billions of submicroscopic perforations. The barrier has a filtering action: the gas molecules which contain U-235, being lighter than those containing U-238, move about faster and a greater proportion of them strike the barrier and pass through the perforations into the second compartment. This gas, now slightly richer in U-235, is pumped into another chamber, where the process is

repeated, then on through chamber after chamber until most of the U-238 is strained out. So slight is the filtering effect at each stage that the gas must pass through hundreds of acres of barriers and thousands of miles of pipe before it is sufficiently purified.

K-25 is the largest continuous-process plant in the world. An industrial leviathan, completed in 1945 at a cost of \$400 million, it grew out of experimental laboratory work conducted at Columbia University. Its separation system, once considered far too complex to be engineered (specifications for K-25 fill 20,000 pages), has proven to be practical—so much so that an addition, K-27, has already been completed and still another, K-29, is under construction.



diffusion system covers one of the lower floors, its pipe gallery the floor above. Both floors, whose volume exceeds

6 million cubic feet, are completely sealed and kept at an even temperature. Operations are remotely controlled

by instruments on the top floor of the building which are checked by operators who make their rounds on bicycles,



EXPLANATION OF GASEOUS DIFFUSION process is given by this hypothetical and simplified diagram. Gas containing natural uranium, 99.3% U-238 (small dots) and 7% U-235 (large dots), is pumped into top of first

chamber (left). About half of it diffuses down through the porous barrier into the lower compartment, from which it is pumped into the top of the second chamber. Half of this enriched gas is diffused through the second barrier

and sent on to the third chamber. The rest, now partially depleted, is pumped back to the preceding chamber to be run through again. This pattern is repeated at each of the thousands of stages involved in the separation process.



MODEL illustrates the basic principles of A-bomb design. Essentially the bomb works by bringing together about 30 pounds of U-235 or plutonium, the critical amount necessary to sustain a chain reaction. Once the material is assembled, the reaction immediately begins, started by spontaneous fissions which occur continually

in the metal. Since the components must be assembled extremely rapidly, a rocket or gun might be used to drive one against the other. A spherical form is probably used because its compact geometry allows fewer neutrons to escape, thus increasing the intensity of the reaction. The faces of the two hemispheres are milled in a toothlike

pattern to make area of contact as large as possible. The actual bomb mechanism is of course far more complicated. Engineered at Los Alamos (the closely guarded weapons research laboratory, whose operations cannot be described) and manufactured at the nearby Sandia plant, it is one of the nation's top military secrets.

IS BOMB NONE OF THE PEOPLE'S BUSINESS?

On Dec. 5, 1945 Physicist J. Robert Oppenheimer, wartime director of the Los Alamos laboratory, testified in Washington before the Senate's Special Committee on Atomic Energy. In the course of his testimony he was asked—and answered—the most crucial and far-reaching question that can be raised about the entire American atomic weapons program: At what rate does the U.S. produce atomic bombs?

"How long," asked Senator Millard Tydings, "would it take us to make 50 [bombs]?"

"Maybe nine months," replied Oppenheimer.

By simple arithmetic it is possible to deduce from this statement that the U.S. must by now have at least 300 bombs. This one comment, therefore, enables any layman who stops to think about it to determine the approximate size of his country's stockpile. Three hundred is almost certainly a minimum figure. Official reports have announced recent additions to the existing production plants

(early this year the AEC contracted for a \$100-million expansion program at Oak Ridge). But any intelligent person—be he citizen or spy—can obtain an even more accurate estimate of this ostensibly secret figure. For there are available in libraries throughout the country published and unclassified documents, many of them released by the government, which contain facts upon which such an estimate may be based.

It must be assumed that the approximate size of the U.S. stockpile of bombs is no secret. Nevertheless this information, so vitally necessary to the making of policy, is denied to the people who are finally responsible for determining what policy shall be: the citizens of the U.S. and their elected representatives.

There is no possible justification for this kind of overextended secrecy. Enlightened members of the federal government know this, and they have fought its growth. Two years ago David Lilien-

thal, then chairman of the Atomic Energy Commission, warned the American people of the harmful effects that such phony security might have: "There is a growing tendency in some quarters to act as if atomic energy were none of the people's business. . . . In my opinion this is plain nonsense, and dangerous nonsense—dangerous to cherished American institutions and for that reason dangerous to genuine national security. . . . If schemers or fools or rascals or hysterical stuffed shirts get this thing out of [the people's] hands, it may then be too late to find out what it is all about."

The restriction of public knowledge Lilienthal feared is being brought about. So stifling are the effects of all-encompassing security that conscientious publications are unwilling to take the responsibility for presenting conclusions which they themselves could draw from the available, non-secret literature. The government can and should take that responsibility—now, before it is too late.

ANSCO...AND ONLY ANSCO...GIVES YOU CLEAR SNAPSHOTS

Guaranteed with Any Camera... in All Weather... All the Time!

Yes,
"THIRD
DIMENSION"
Realism!

Your eyes see thousands of shades of gray... ANSCO ALL-WEATHER FILM sees them, too... and captures them in pictures with DEPTH AND REALISM



Only Ansco All-Weather Film guarantees you pictures like this

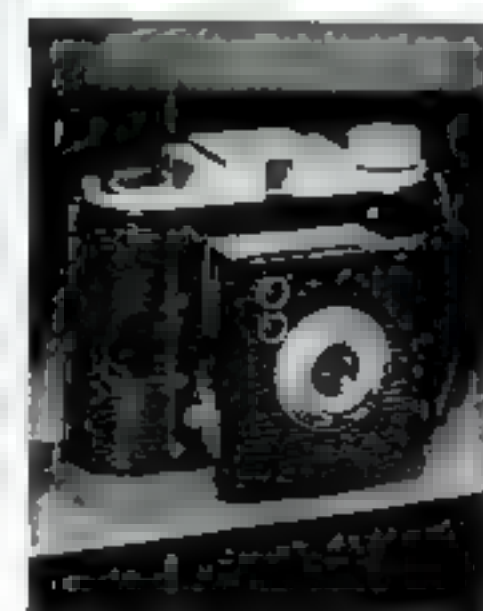
Rain or shine, indoors or out, all through the year, Ansco All-Weather Film now gives you crisp, clear snapshots with depth-like brilliancy and realism.

In any camera... in all weather... you are guaranteed sparkling snapshots that

ANSCO, BINGHAMTON, NEW YORK. A DIVISION OF GENERAL ANILINE & FILM CORP. "FROM RESEARCH TO REALITY".

almost "spring to life". Remember, there's only one ALL-WEATHER film. That film is Ansco! Rain or shine... you can't miss!

GUARANTEE: Ansco guarantees the results you want—or return your negatives and film carton and we will send you a new roll, free.



FLASH CLIPPER —
A pocket size camera with flash shutter. Handsome all-metal construction, f11 lens; built-in flash with Anscoflash Type II available. 2 1/8" x 2 1/2" pictures.
NOW ONLY \$13.75
FLASH UNIT \$4.00
(Prices include tax)



LOOK FOR THE RED AND BLUE BOX

Ansco All-Weather Film

Van Heusen *CENTURY* Shirt
new and revolutionary!

the shirt with the soft collar that

**won't
wrinkle
... ever!**



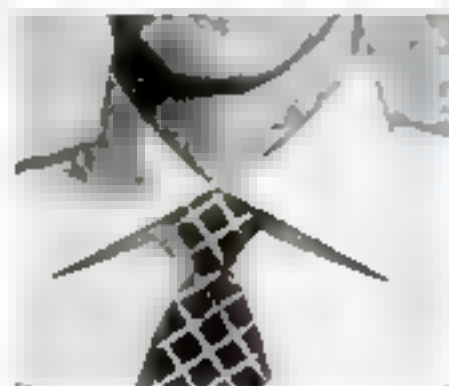
Secret of the Century! It's woven in one piece. No sewn or fused layers to wrinkle. The fold line is woven in to stay . . . can't even be ironed wrong.

Both qualities in two collar models, single or French cuffs.

Century 100 Regular collar, \$3.95 Century 400 Regular collar, \$4.95
Century 200 Wide-spread, \$3.95 Century 500 Wide-spread, \$4.95



Perspiration won't wilt it!
Soft collar of new Van Heusen Century keeps neat day thru night—without starch! . . . or without stays!



Laundering won't hurt it!
Easy to launder—you can't even iron-in wrinkles. No starch, less ironing mean more wear, more comfort.



Patented one-piece collar!
Has no lining—just can't wrinkle. Its smart "Comfort Contour" collar styling always gives a neat look.

Van Heusen REG. U. S. P. O.
CENTURY shirts

A new shirt free if your Van Heusen shrinks out of size! **\$3.95 and \$4.95**
Phillips-Jones Corp., New York 1. Makers of Van Heusen Shirts • Ties • Pajamas • Collars • Sport Shirts

FISH-EYE VIEW

Michigan perch get rare look at ice fishermen

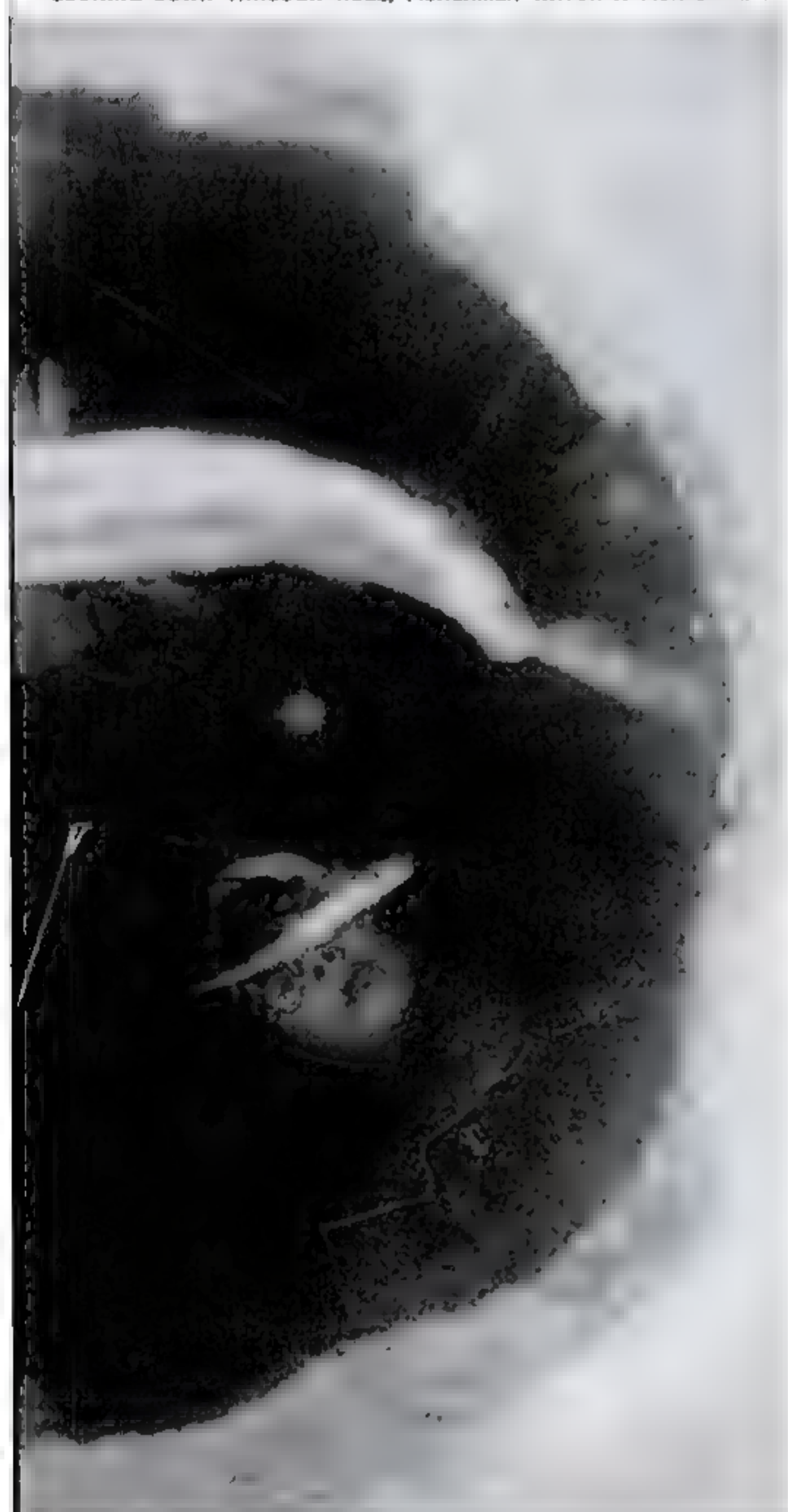
This winter the coming of ice to Tawas Bay in northern Michigan brought the erection of a strange and colorful town. Called "Perchville" by its fishermen inhabitants, it consists of some 200 gaily decorated shanties (p. 104) stretching three miles out into the bay. Ardent ice fishermen who want to keep out of the bitter wind gather in these tiny shelters and drop their lines through circular holes cut in the ice, presenting the cozy appearance at right. Some catch perch with conventional poles and hooks, others come armed with forked spears which they jab at the fish swimming by. After spending several days taking pictures of the residents of "Perchville" staring down through the clear water at their quarry, an enterprising Detroit photographer named Joe Clark lowered his Speed Graphic in a plastic bubble to the bottom of the bay and got a startling fish-eye view of its would-be captors (*below*).



LOOKING UP through the hole, a passing perch could see this circle of intent human faces as three of its unsuspecting fellows swim near the dangling

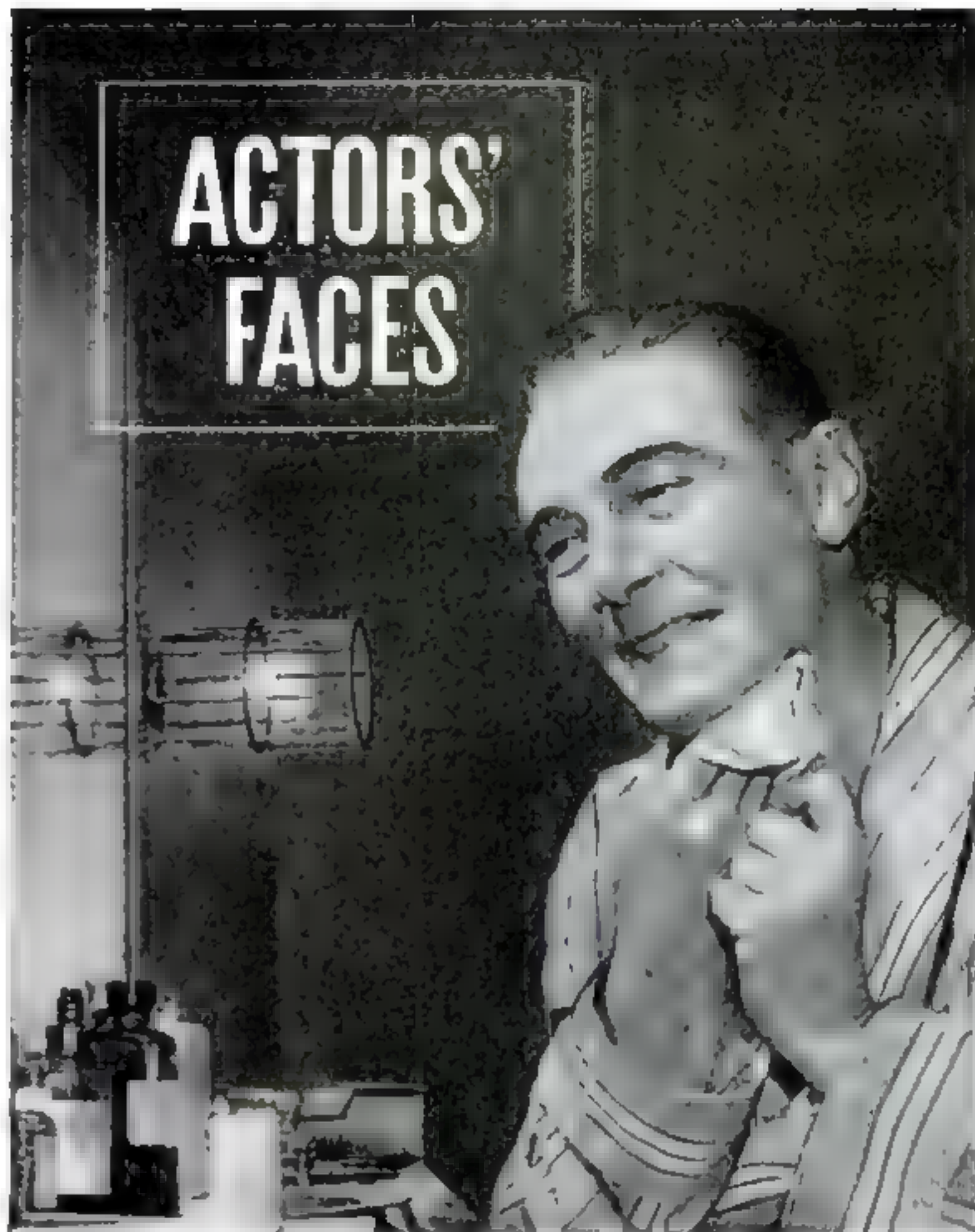


LOOKING DOWN THROUGH HOLE, FISHERMEN WATCH A FISH COME BY



bait and the poised spears. Photographer Clark spent three shivering days getting this picture, which was taken from 6 feet below the surface of the water.

CONTINUED ON NEXT PAGE



PAUL LUKAS, shown here in his dressing room, demonstrates how removing stage make-up can make an actor's face tender, extra-sensitive. That's the reason so many Broadway and Hollywood stars rely on Williams for easy-on-the-face shaving.

Actors' faces are extra-sensitive

But Paul Lukas finds shaving with
WILLIAMS' NEW "EXTRACT OF LANOLIN" CREAM
helps keep his face looking young and healthy

● Just since our father's day, science has added 16 years to our lives! To make the most of these valuable years, more and more men are taking a *young man's* care of their appearance.

This is especially true in the theatre—for actors, more than any other group of men, must look their young, healthy best at all times.

But wearing and removing heavy stage make-up leaves actors' faces extra-sensitive—tends to coarsen and dry out the skin. This means painful discomfort in shaving and can actually lead to wrinkled, old-looking skin.

REMARKABLE NEW INGREDIENT

To help actors—and other men with sensitive skin—maintain a young and healthy appearance, the J. B. Williams Company has developed a method of adding an amazing new substance to Williams Shaving Cream. This new ingredient, Extract of Lanolin, closely resembles the natural oils of the skin.

It helps protect the face against excessive dryness, daily blade scrapes—even hot

and cold weather conditions.

Enriched by this remarkable new substance, Williams Shaving Cream gives you the thorough facial preparation necessary for a good shave. Williams' heavy, wet lather reduces the hardness of each wiry whisker by as much as 60%! It makes whiskers so soft they come off with the minimum of pressure on your razor.

YOUNG-LOOKING SKIN

Now—every time you shave with the New Williams Shaving Cream—you give your face the benefit of Extract of Lanolin, which helps preserve the youthful qualities of the skin. *Williams is the only Shaving Cream containing Extract of Lanolin.*

If you're an executive, a salesman, a doctor, lawyer or actor—or hold any sort of responsible position calling for a well-groomed look from morning till night... or if your face is sensitive to the sharp cutting edge of your razor... you'll want to start using this remarkable new shaving cream right away. You'll find the New Williams at better drugstores and toilet goods counters everywhere. Buy a tube today.

News for a Reporter



Look into the facts on Sauterne wine and find out why it is creating such a sensation with chicken and fish. This is a story packed with good taste!

It's an easy assignment to cover.
You just chill the Sauterne and serve.

And remember: A Sauterne wine of California costs so little you won't even want to put it on your expense account!

Wine Advisory Board, 717 Market St., San Francisco 3, California



HAIR GETTING THIN? THEN GROOM IT WITH KREML

TO AVOID THAT GREASY LOOK—
KEEP SCALP MORE HYGIENIC!

There's nothing better than Kreml to neatly groom thinning hair or sparse locks. Kreml doesn't look the least bit greasy, sticky or goeey. No dirt-catching film shows through on the scalp. Kreml always keeps hair and scalp looking and feeling so clean. AND SO VERY IMPORTANT—Kreml removes dandruff flakes (more noticeable with sparse hair); it lubricates a dry scalp, giving it a delightful tingle. Change to Kreml today.



KREML Hair Tonic

Ice-Fishing CONTINUED



ADVERTISEMENTS of local merchants are painted on fishing huts. Businessmen in Tawas build many huts, charge no rent to people who use them.



PRIVATE SHANTY proclaims profession of its owner, Dr. O. W. Mitton, and his willingness to perform minor surgical operations on clumsy fishermen.



WEARY SKATER reclines in sled leaning against wall of fish shanty which advertises local entertainment place. Tawas Bay is an arm of Lake Huron.



It's *Sunshine...*
for **Finer Flavor!**

Crunchy, golden HI HO Crackers! The crispest friends
your soups, spreads and salads ever had! Look for them
now at your grocer's in this big, bright package!

From the Thousand
Window Bakeries of



MAKE A LUSCIOUS HOME-MADE LEMON PIE

It's easy!
Economical...
With My-T-Fine
Lemon Flavor
Pie Filling

WELL! I
NEVER KNEW
IT WAS SO EASY
AND ECONOMICAL
TO MAKE A
HOME-MADE LEMON
PIE. I SIMPLY
FOLLOWED
THE RECIPE
ON THE
PACKAGE!



OF COURSE
I ALWAYS KEEP
THESE OTHER
MY-T-FINE FLAVORS
HANDY TO MAKE
DELICIOUS PUDDING
DESSERTS QUICK
AND EASY



MY-T-FINE

Lemon Flavor Pie Filling



TOMORROW'S STARS SHOW THEIR STUFF

Mary MacArthur memorial vaudeville brings out top talent of lower age groups



MARY MacARTHUR was 19 years old when she died of polio

Biggest event of the theatrical year, junior division, was a variety show put on last month by some children aged 5 to 17 in an auditorium on upper Broadway. It was a memorial for young Mary MacArthur, daughter of Helen Hayes who died last year. Performers were pupils at the Professional Children's School, which teaches the three "R's to young-

sters who have to work the irregular hours of show business and cannot attend regular school (most famous alumnus: Milton Berle). For two hours the stars of tomorrow put their best feet forward in everything from leg art to melodrama. The audience agreed they were well worth the \$100 price of admission. Total receipts for the March of Dimes: \$9,000.

MARIE MOLINO, 6, SINGS "YES I MUST LOVE SOMEONE AND IT MIGHT AS WELL BE YOU" TO RONALD WALKEN, 6, IN THE SHOW-STOPPING FLORADORA SEXTET NUMBER



How to get *SLEEP!*



She can thank Phillips' **ANTACID ACTION** for this!

When acid indigestion—which often accompanies constipation—keeps you awake, here's how to get to sleep: Take Phillips' Milk of Magnesia—one of the fastest, most effective stomach acid neutralizers ever discovered. As thousands

who have done this know from experience, Phillips' Milk of Magnesia eases away the acid condition almost before you realize it...and you drift off to sleep—a sound, peaceful sleep that will thoroughly rest you.

GET UP— on top of the World!



She can thank Phillips' **LAXATIVE ACTION** for this!

Phillips' Milk of Magnesia will help you start the new day feeling grand—bright, alert, wonderfully refreshed—not simply because it helped you sleep well last night, but also because it brought you gentle, effective constipation relief this morning. Double-Action Phillips', you see, is *more* than an excellent antacid. It's a marvelous laxative, too!



Liquid Phillips' is available in 75¢, 50¢ and 25¢ bottles. Phillips' Tablets in \$1.00, 50¢ and 25¢ sizes.



Children's Show CONTINUED



EMPTY SEAT was reserved for Helen Hayes, who could not come because of a performance of her new show. Next to her seat is Mrs. Hammond Speiden, president of the school. In second row (center) is Actress Dorothy Stickney.



DRESSING-ROOM BEAUTIES Betty Jane Siegel, 7, and Jacquelyn Young, 8, who both work as models, cast professional glances over each others' costumes while young ladies in background are fitted into Floradora gowns.

CONTINUED ON PAGE 11

"You Washed Those Venetians In Only 3 Minutes?"



Mrs. Dudley Brown of Leawood, Kansas says: "My Sunchek Venetian blinds are seven years old, yet look like

new. The slats are easily cleaned; they resist dirt and fading due to washing or sunshine."

New Kind of Plasticized Venetians ...Successors to Heavy, Noisy, Hard-to-Clean Old-Style Blinds!

A patented new slot material is the secret! It combines a fabric as strong, yet fine as linen with new plastic. Gives amazing new strength, lightness, costly appearance, "cleanability."

You can wash all the Sunchek Venetians in your house more easily than taking down and washing curtains! Slip them out of header—wash in lukewarm suds in sink or tub—spray with bathtub hose. They're color-fast, fade-resistant, and even working parts are weather-proof.

A "Beauty Bonus!" Suncheks give you full privacy. But they also transmit light—with

the same soft glow you get from a costly real-parchment lampshade.

Suncheks weigh only $\frac{1}{3}$ as much as heavy old-style blinds. They're easy to raise and lower. That's why the mechanism, cords and tapes wear up to ten years. Silent, too!—no clatter and rattle!

No Costly Installation. So simple, light, and easy to handle you could install them yourself in only a few minutes.

Only Suncheks Have 4-way Slat Adjustment. Patented Sun-E-Clipse hold Suncheks open at top for air and light, close them at bot-

tom for privacy. Or close Suncheks at top; open at bottom.

"Dunked" in Water 38,385 Times! Yes—at the 1949 Kansas City Homes Show a Sunchek Venetian was plunged up and down in a tank 38,385 times; yet slats were still good! Water can't damage Suncheks' plasticized finish, guaranteed even for bathroom use!

Guaranteed Three Times As Long as any other nationally-advertised Venetian blind: Money back if Suncheks' mechanism, cords, tapes or slats fade, fail, or show wear any time inside 3 years, due to water, weather or wear!

Sunchek
Plasticized Venetian Blinds



Write for Wm. Volker & Co., Dept. LF-1002, 3rd & Main Sts., Kansas City 6, Mo.

Mail Coupon Today!—Find out how you, too, can use SUN-CHEK Venetians, to make your home more attractive!

Wm. Volker & Co., Dept. LF-1002
3rd & Main Sts., Kansas City 6, Mo.

Yes, send me your interesting illustrated folders that tell how SUN-CHEK Venetians can help me make my home more attractive!

Name _____

Address _____

Town _____ State _____

TO HAVE AND TO HOLD! Loss-defying NuAce Mounting Corners keep snapshots safe. Exclusive NuAce adhesive backs won't dry out... stay stuck.



KEEP KEEPSAKES SAFE! Picture postcards, programs, invitations, announcements stay neat, stay new in NuAce Mounting Corners.



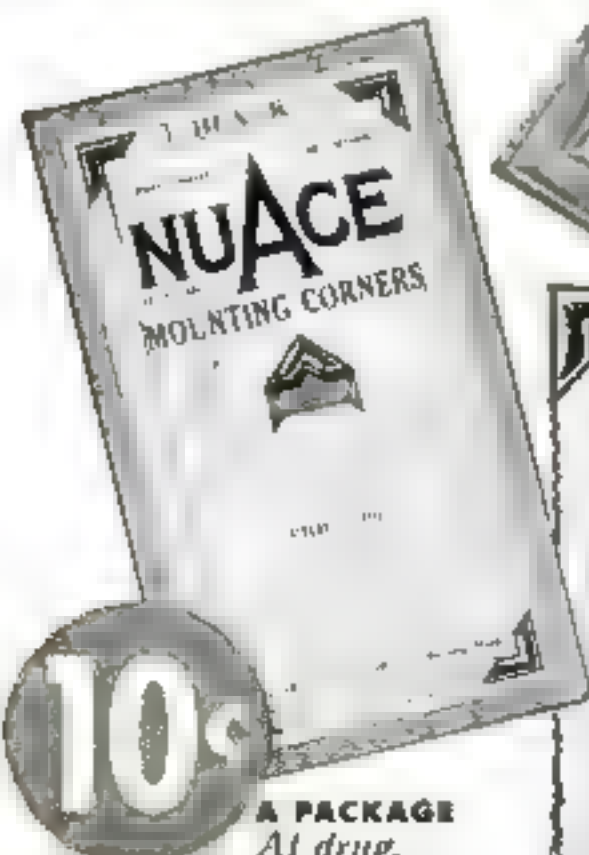
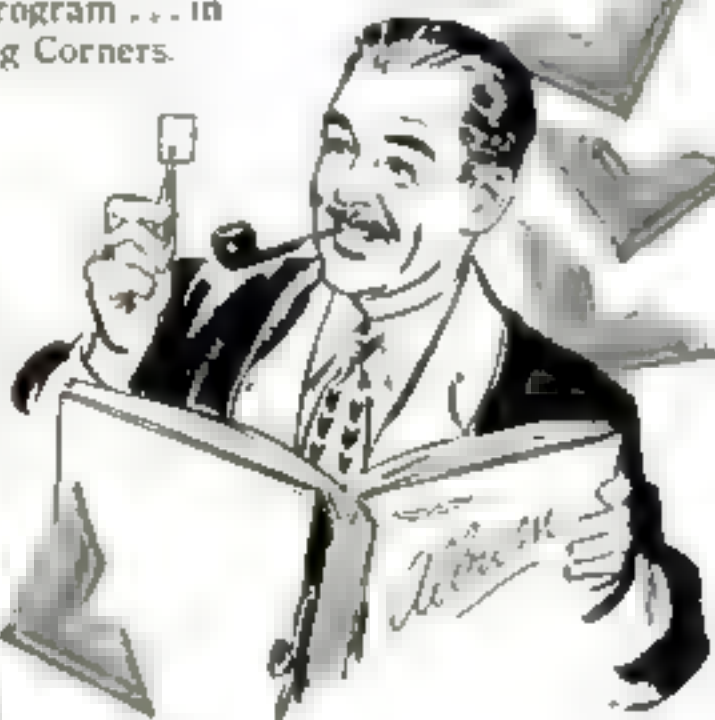
How to Treasure Treasures

THE CARDS THAT DIDN'T GET AWAY! Christmas cards and greeting cards of all kinds make gay collections when saved in NuAce Mounting Corners.



BABY, HOW YOU'VE GROWN! Mamas, Papis! Keep her records permanently (his, too) ... from birth announcement to graduation program ... in NuAce Mounting Corners.

MATCH BOOKS, STAMPS, FIRST DAY COVERS, PLAYING CARDS? Collectors! You can depend on firm-fastening, non-drying NuAce Mounting Corners. 3 sizes. 12 colors include black, white, gold, silver, red, green. Also transparent.

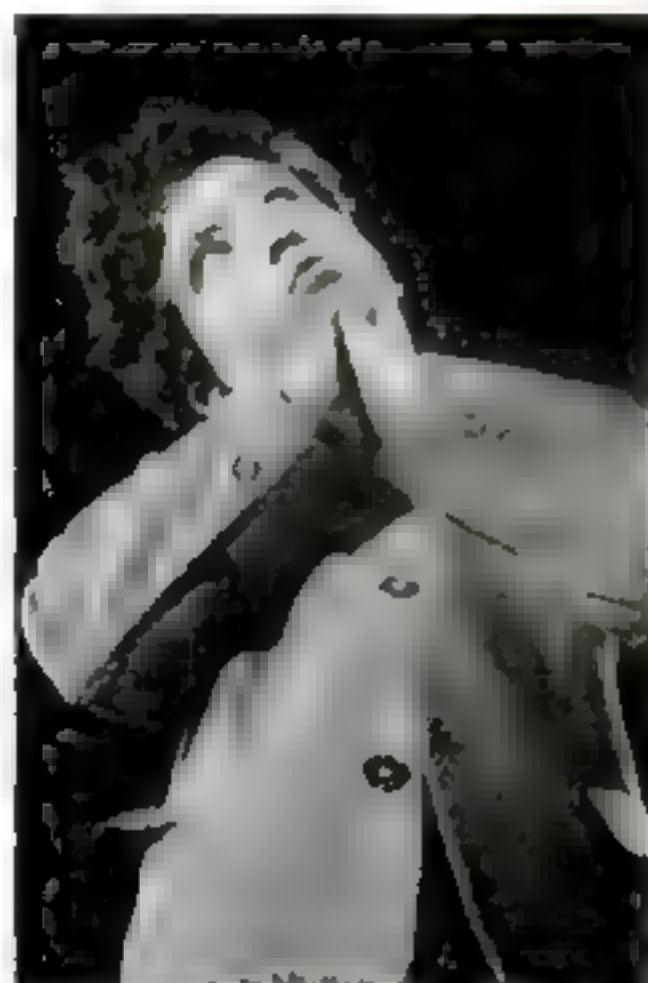


A PACKAGE
At drug,
camera, 5 and 10,
department and
stationery stores.



ACE ART COMPANY, Reading, Mass.

Children's Show CONTINUED



SHOW-STOPPER was Bruce Steinberg, 6, singing with dramatic gestures:

Gee, I wish I was a caveman's kid,
So I could do the things they did.
If I lost my temper, I could let it out.
I'd just grab a tiger's tongue and turn him inside out.
I'd never go to Sunday school to be measured by the golden rule,
I'd go and catch a woolly worm and squeeze him till he squirms.
Gee, I wish I was a caveman's kid!

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BRUCE SITS BACK and ponders the many serious problems of show business while a pretty neighbor gives wholehearted attention to act following him.

CONTINUED ON PAGE 113



"Impromptu Concert," by John Galtman. Number 100 in the series "How a Life in America."

Beer belongs...enjoy it

In this home-loving land of ours . . . in this America of kindness, of friendship, of good-humored tolerance . . . perhaps no beverages are more "at home" on more occasions than good American beer and ale.

For beer and ale are the kinds of beverages Americans like. They belong—to pleasant living, to good fellowship, to sensible moderation. And our right to enjoy them, this too belongs—to our own American heritage of personal freedom.



AMERICA'S BEVERAGE OF MODERATION



*Dress beautifully
and cut clothing costs in half!*

YOU CAN DO IT WITH A NEW SINGER SEWING MACHINE

TAKE THIS lovely wool dress, for example. Smart style, fine fabric, expensive detail. You'd be lucky to buy it for \$30 or \$35.

But you can *make* it for less than half that price. Make it easily—with one of the new SINGER® Sewing Machines. They're the smoothest, easiest stitchers that ever flew down a seam. Portables from \$89.50,† cabinet electrics from \$147.50.†

See the new models now. And whenever you want notions, lessons, buttons covered to order, call on your SINGER SEWING CENTER.



• For smooth-stitching dependability, no other make can match SINGER. And it's nice to know you can always get service and supplies from any of a thousand SINGER SEWING CENTERS. Above is a newest SINGER console.



• Best-seller among machines — SINGER® Feather-weight Portable. Weighs only 11 pounds. Comes in neat luggage-like case. Stitches forward and backward, sews over pins, has all the features of a full-size model.



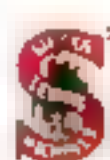
• Going modern? You'll like this SINGER desk-model machine. A double-duty piece with roomy drawers, matching stool. SINGER has handsome period styles, too. Colonial, Queen Anne, console—all in the finest woods.



• When you buy your new machine, you get a SINGER course in home dressmaking or decorating plus a set of basic SINGER attachments—at no extra cost. SINGER® Molded Dress Form, above, molded to your figure, makes perfect fitting easy.



• Notion shopping is simple—at your SINGER SEWING CENTER. You'll find thread, scissors, trimmings, buttons—and the wonderful new "SINGER Sewing Book," a complete guide to home sewing with 1000 illustrations.



FOR YOUR PROTECTION SINGER sells and services its Sewing Machines, Vacuum Cleaners, and other products only through SINGER SEWING CENTERS, identified by the Red "S" Trademark and the "SINGER SEWING CENTER" emblem on the window, and never through dealers, department stores or other outlets.

Illustrated at the right is the SINGER SEWING CENTER at 823 Locust Street, St. Louis, Missouri. Hundreds more from coast to coast! For address nearest you, see classified phone directory under SINGER SEWING MACHINE COMPANY.

SINGER SEWING CENTERS

THERE'S ONE NEAR YOU TO SERVE YOU



Plaid jacket dress above is made from Butterick Pattern #5142.





TAP DANCE was expertly performed by Ronnie Lee, who at 12 is a veteran actor on the radio and dancer on television. He also did classical ballet number.



HOWARD LINDSAY gives cast roses sent by Helen Hayes. Sixty-five boys who played his sons in *Life with Father* on Broadway were pupils at the school.

FOR GREATER **DIRT-GETTING** ACTION!

The **SINGER** all-new cleaner has **Dual Suction**

CALL your SINGER SEWING CENTER today for a free demonstration in your home. See how the SINGER Budget Plan makes it easier than ever for you to own this wonderful new SINGER Vacuum cleaner!



\$79.75

Only **\$7.95** down

BALANCE AS LOW AS
\$5.00 PER MONTH
LIBERAL ALLOWANCE ON
YOUR PRESENT CLEANER

PLUS ALL THESE EXTRA **SINGER** FEATURES!

Magic Handle! A completely new vacuum cleaner design that puts all controls at finger-tip reach.

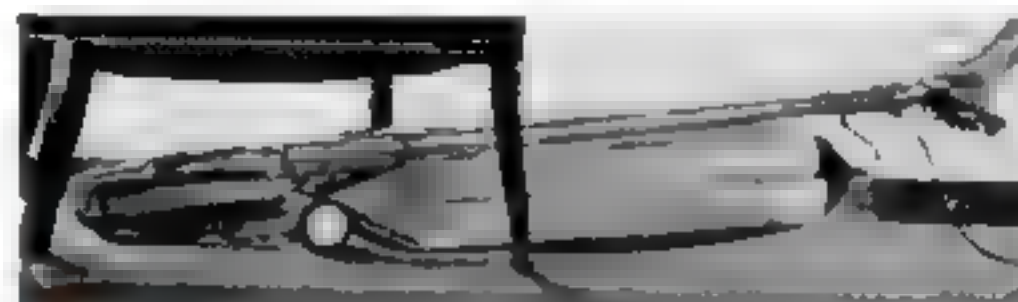
No winding of cord! Control button reels cord in—gets it out of way as you clean!

More cleaning power when you need it! Two-speed switch for heavy and light cleaning.

No more foot-pedal acrobatics! Touch the trigger—and adjust handle to any position.

No stooping! Cord outlet lets you pull out more cord as you need it.

Exclusive "floating" brush gently loosens deep unbedded dirt. Adjusts automatically to most any rug thickness. Easy to carry with midway hand-grip!



↑ **Gets under furniture**—easily. Housing is only 5 inches high! New "all-round" bumper protects furniture—never smudges!

↑ **So easy to store!** Hangs flat against wall. Ideal for small homes and apartments. Ask for a demonstration in your home.



For your protection SINGER sells and services its Sewing Machines, Vacuum Cleaners, and other products only through SINGER SEWING CENTERS, identified by the red "S" Trade-mark and the SINGER SEWING CENTER emblem on the window, and never through other stores or outlets.



SINGER Vacuum Cleaners
are sold only through your...

SINGER SEWING CENTERS

THERE'S ONE NEAR YOU TO SERVE YOU

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IN A SHORT RUN DOWN DOLLAR MOUNTAIN, SIX OF THE SKI BUMS COME TO GRIEF IN A DRIFT OF SOFT SNOW. SOME OF THE BUMS ARE EXPERT SKIERS, BUT NONE IS



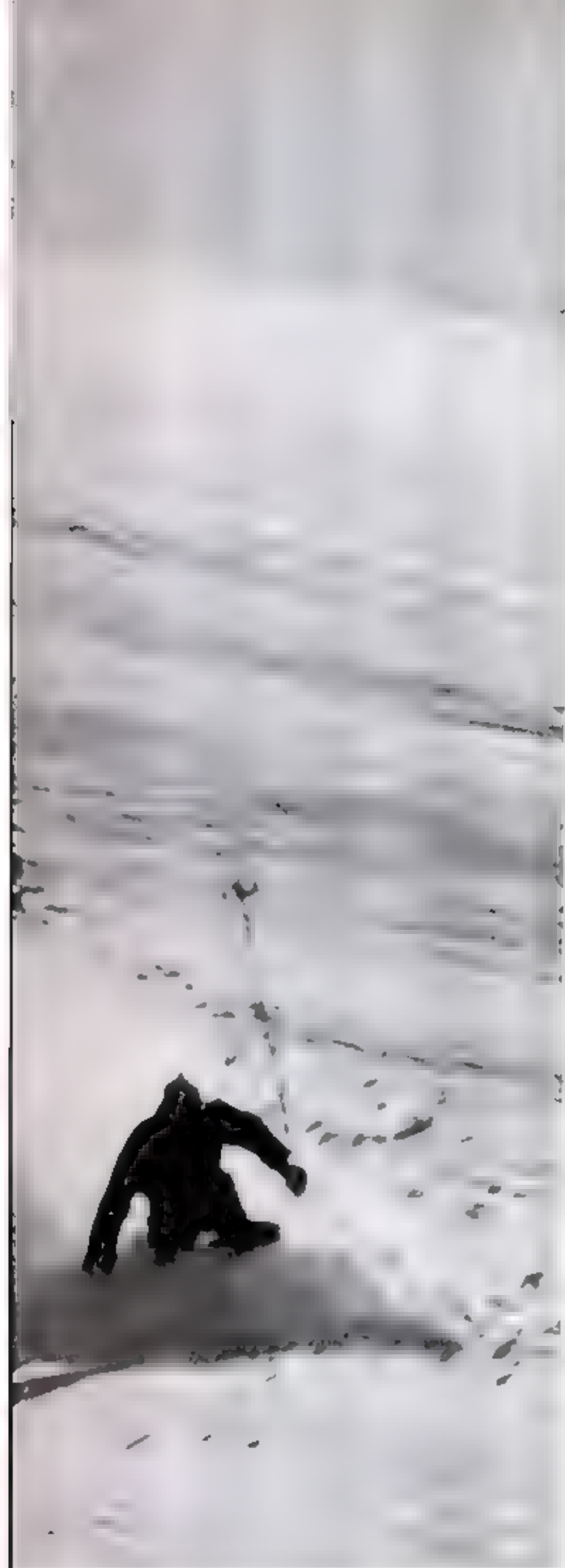
THE TRAILER BUMS, "Obie" Rod and Bob Lombard, cook lunch of horse meat in "Kitchen" at rear of their tiny house-on-wheels. Temperature was 20 below zero.



THEY HITCH RIDE on Dollar Mountain lift. Tickets cost \$4 a day but are free to employees, and Bob and Obie borrow them from their friends who work at the lodge.



THEY TAKE BATH in Sun Valley's famed steam heated swimming pool, where they cannot be distinguished from guests. Afterward they shave in pool dressing room



DISMAYED BY THE BITTER COLD OR FALLS LIKE THIS



THEY TAKE TEA in the swanky Sun Valley Lodge, where guests are served each afternoon as they come in from slopes. Obie (above) looks and acts like a resident.



COLD BUT HAPPY, Ski Bum Obert J. Rod Jr., 24, shivers in the sub-zero temperature despite Army surplus snow hat (25¢) and an old Princeton sweater which he purchased for 50¢.

Life Visits Some Ski Bums

At Sun Valley they live by their wits, work at night and eat horse meat in order to schuss down the slopes

A wealthy guest at the Sun Valley ski center in Idaho can pay as much as \$40 a day to bathe in a steam-heated outdoor pool, ride up and schuss down the snowy slopes of Dollar, Rude and Baldy Mountains and relax over tea and *cunapés* in the luxurious lodge. But the young enthusiasts shown on these and the following pages enjoy the same pleasures for as little as \$1 a week. Some of them operate by their wits alone, others by considerable hard work, but all proudly identify themselves as "ski bums."

The philosophy of the true ski bum is quite simple: he (or she) would rather ski than anything. To satisfy this passion ski bums like "Obie" Rod Jr. (above) and his side-kick, Bob Lombard, are willing to endure merciless hardship. This is the first Sun Valley season for Rod and Lombard. They came to the Idaho resort from San Onofre, Calif., where for several years they have been "beach bums." They arrived with \$30 and a tiny, tinny trailer house. Friends

lend them ski-lift tickets, and in nearby Ketchum they are able to buy "ski bum steaks" (horse meat fillets) for 29¢ a pound. These, plus 30¢ oatmeal, got them through their first week for \$1 apiece. Well-equipped with ski clothes and suave manners, they are able to take full advantage of Sun Valley's many fancy facilities.

Before Rod and Lombard have exhausted their small financial reserve, they hope to get jobs at the lodge. Many ski bums, both male and female, have done so. The boys prefer to work nights, leaving the days free for skiing (*next page*) and partying. Since there is no local labor force, the working ski bums are welcomed by the Sun Valley management. Within the fraternity there is no discrimination. Until nonworking bums like Rod and Lombard get jobs, they can count on the help of Sun Valley veterans like "Scotty" Scott (p. 118), and a warm welcome at the working bums' payday "batch" parties (p. 120).



IF A FIRE should sweep you out of your home, your Fire Insurance would start you on your way to rebuilding . . . but what about the high cost of living in another location and paying rent, perhaps for many months?

Or, if you own income-producing dwellings or apartment buildings, and fire makes it impossible to rent them—what about the loss of income you would suffer for an extended period?

You can protect yourself against either of these costly hazards with sound insurance: *Rental Value Insurance* in the case of your own dwelling; *Rent Insurance* in the case of income-producing property.

Home owner, or landlord, your fire protection is not complete without this coverage to fill the gap between the fire, and eventual restoration of your property.

Ask your America Fore Insurance Man about Rent Insurance. To get his name and address, call Western Union by number and ask for Operator 25—TODAY!



CALL 6142 TOLL-FREE TOLL-LESS FOR INSURANCE COVERAGE 24 HOURS

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INSURANCE AND FINANCIAL SERVICES

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Ski Bums CONTINUED



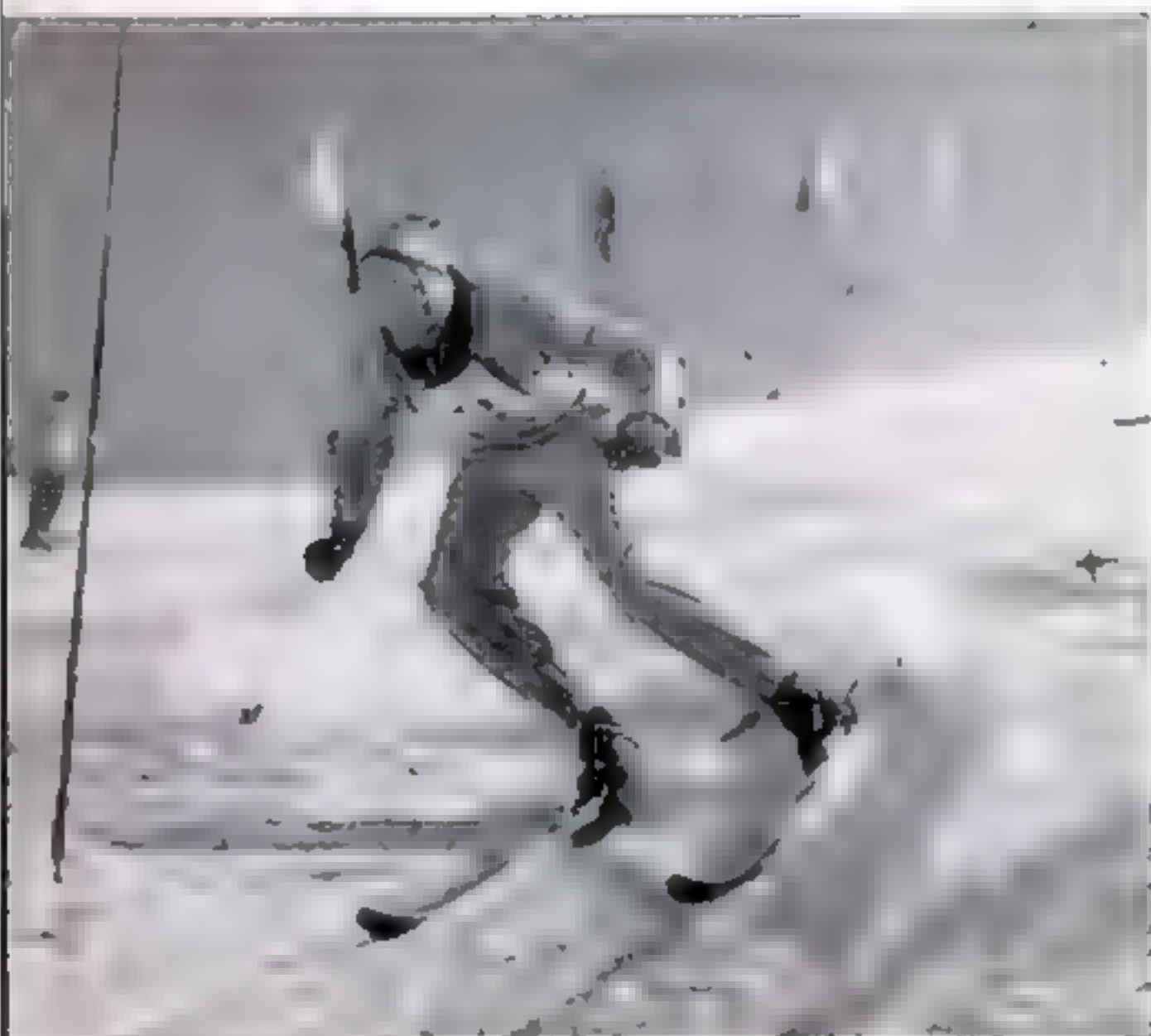
AS A BUS BOY in the employees' recreation hall, 6-foot 6-inch Jerry Pesman, 24, a Colorado engineering student, earns enough money to keep him on skis.



A 23-YEAR-OLD SKI BUM FROM MASSACHUSETTS, PRETTY BEBE WALKER



A PIN BOY BY NIGHT, Jerry Edwards, 20, of Portland, Ore. works about six hours in bowling alley to support himself and qualify for free lift tickets.



ON SLALOM COURSE Pesman wins Class C contest in annual San Valley race. A part time fan, he quits school every winter to devote himself to skiing.



WORKS AS A WAITRESS, WON WOMEN'S CLASS "C" SLALOM THIS WINTER



A GLAMOUR BOY BY DAY, Edwards skis with Joan Sculner of Omaha. She works in Puerto Rico in the summer, while he "beach bums" in California.

CONTINUED ON NEXT PAGE



Memo to a Steno

When you cover up your typewriter at five — dash out and pick up a bottle of Burgundy wine to make your dinner letter-perfect.

It's quicker than shorthand, too. You just cool the wine and serve.

And you can carbon-copy this dinner success as often as you like. For a good Burgundy wine of California costs less than carfare per glass.

Wine Advisory Board, 717 Market St., San Francisco 3, California

NO TWIST NO TURN NO TROUBLE



Frontier

the BRA that hooks DOWN THE FRONT!

ABOUT \$1⁶⁰

So easy to slip on... what wonderful fit and separation. White, pink, blue or black rayon satin... or white and pink broadcloth. A cup, 32 to 36. B cup, 32 to 38. C cup, 34 to 42. In nylon \$2. Deep Rayon Satin 34-44 \$2.



True Form



Makers of the Kant Roll girdle

Clip coupon and mail today

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Ski Bums CONTINUED

"SCOTTY" IS DEAN OF THE GROUP



IN ANCIENT AUBURN 35-year-old Edward Scott, a New Yorker and an alumnus of Amherst and M.I.T., gives some of his disciples a ride to the ski lift



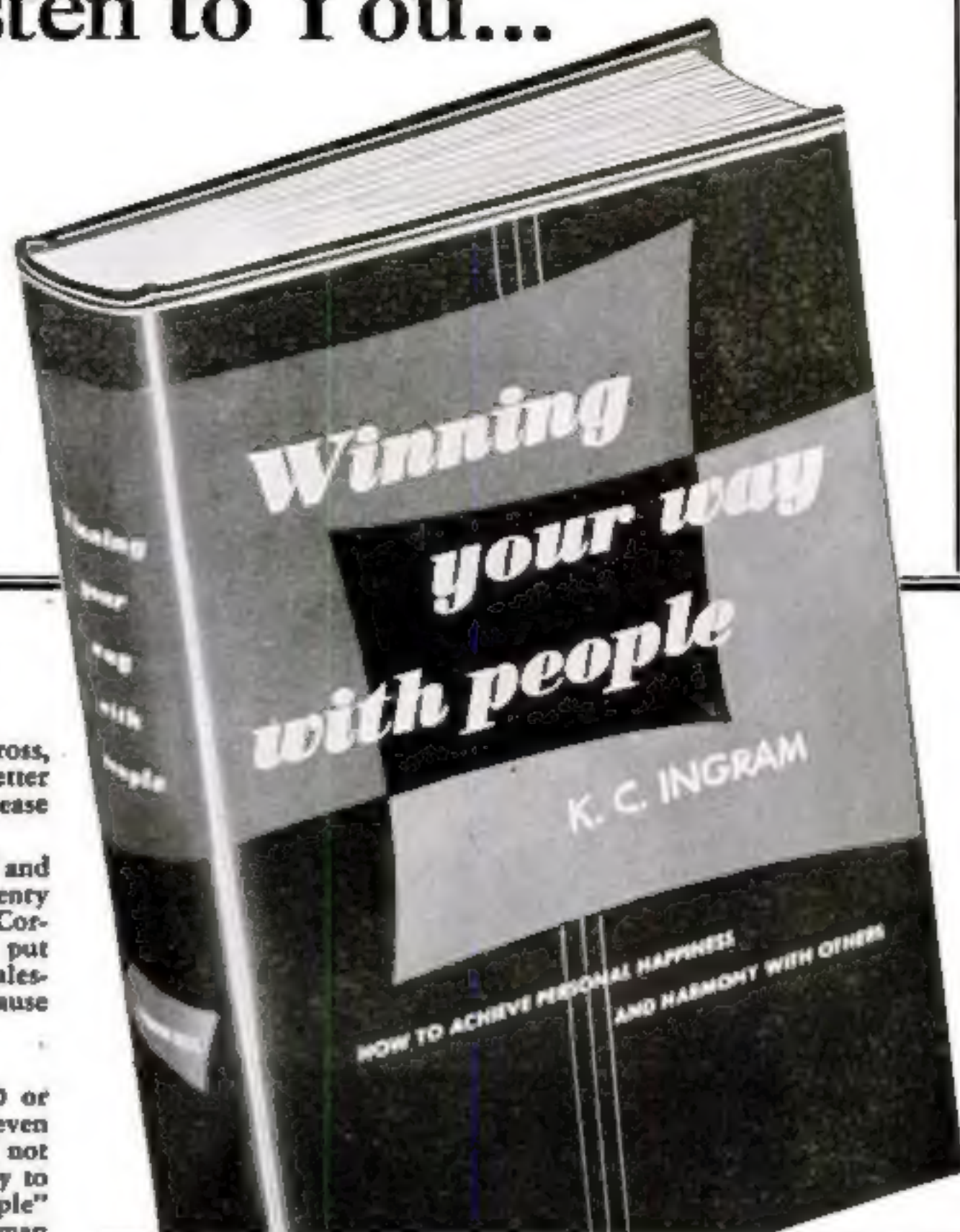
ON WOBBLING SKIS Scott essays a jump. He owns one suit, 15 pairs of skis and he is in his third year as a ski bum. He usually does better than this.



ON END OF MOP Scott pays his way by cleaning up the Dollar Lodge at night. He hopes to become independent next year by opening a ski repair shop.

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How to make people listen to You... Think well of You... Agree with You... And remember You...



Your Success Depends On Your Ability to Win Others to Your Way of Thinking —Here Is a Proven Method for Achieving the Goals You Desire!

John D. Rockefeller once said: "I will pay more for the ability to deal with people than for any other ability under the sun."

A group of top executives recently put "ability to handle people" above technical skill, capacity for decision and any other personal quality which contributed to their success. Dr. William J. Reilly, noted personnel consultant, says, "... an analysis I recently completed showed that 84% of ... failures can be attributed to faulty human relations."

Yes—the one *success secret* upon which every authority agrees is the ability to influence and direct the efforts of others. Top salaries are paid to those who have this gift. Mediocre jobs, failure to achieve one's rightful station in life, and a colorless, indifferent social existence practically always "trade-mark" people who do not understand how to get along with those who work with them or for them, or with those who come in contact with them after business hours.

As S. T. Mercier, President of the Southern Pacific Railroad Company, says: "Technical skill is seldom sufficient for marked success ... the great need at the top is for men who can organize, direct and harmonize the work of others."

A Guide to Handling People

Here, at last, is a guide to handling people successfully. Prepared by K. C. Ingram, assistant to the President of the Southern Pacific Railroad, and for many years a feature editor for the Associated Press, it reveals the psychology of making people *listen* to you, think *well* of you, *agree* with you and *remember* you. In simple language, it explains how to gain

poise and confidence, how to put your ideas across, how to think on your feet, how to make better speeches, write more compelling letters, increase your selling efficiency.

"Winning Your Way With People" will hold and inspire you as no book has done in years. Dr. Henry C. Link, Vice President of The Psychological Corporation, says of it: "Management will want to put this book into the hands of every supervisor and salesman, both because it is highly readable and because it is highly practical."

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Few men have ever earned \$10,000, \$25,000 or \$50,000 a year with their own two hands or even with just their own heads. Ideas and work are not enough! Men are paid according to their ability to manage others! "Winning Your Way With People" helps you to apply the principles of successful human relations worked out by actual experience. To read this book is to gain a vast amount of practical knowledge *at once*, instead of having to grope for it through your own experience alone!

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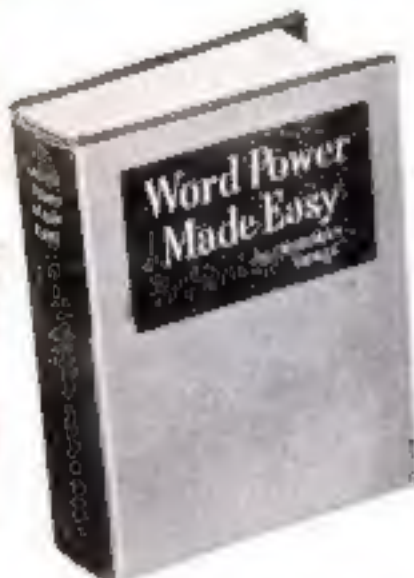
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LOOKS—Center V in Vamp-Top is ingenious guide for straight seams. Exquisite sheers with hairline seams, Taper-Slim heel and Vamp-Toe . . . in fashionable and flattering "Spritely Shades" for Spring.

FIT—Unlike ordinary nylons, Larkwoods are knit to conform to the leg. They are Volu-Metrically sized and shaped from toe to thigh for Small, Medium and Tall dimensions—not just made different in length.



You can be sure it's the patented and exclusive Larkwood Vamp-Top if it has the three distinctive knit-in V's . . . for thigh-conforming fit, better wear, straight seam guide. Ask your hosiery salesgirl for a demonstration of the "3 V's."

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Ski Bums CONTINUED

ON PAYDAY EVERYONE CELEBRATES



AT "BATCH" PARTY in rented cabin on payday, bums join to drink fierce "batch" made of grape juice, grapefruit juice, beer, Seven-Up, gin and rum.



PARTY WARMS UP as Obie Rod whispers in the ear of 23-year-old Marty Gregg. Except for monthly batch parties, the bums usually stick to beer, wine.



PROUD TO BE BUMS and confident something will turn up when their \$30 is gone, Obie Rod and Bob Lombard scratch autograph in Sun Valley snow.

Where Portuguese longhorns get **short tempers**

1 "Bisco bulls get fighting mad when they feel the pikes of Portuguese *campinos*, who raise the bulls for the arena. On a ranch north of Lisbon one young bull wheeled on me—and charged!" writes Granger Pinto, an American friend of Canadian Club. "Spurring my pony, I narrowly escaped those menacing long horns..."



2 "Bravo senhor!" cried one *campino* when I'd recovered my breath... and my balance. "You dodged that fellow like a real picador." And he presented me with a colorful souvenir—one of the bright green caps that only a full-fledged *campino* may wear.

3 "Every man's a torador on the day of the bullfights in nearby Villa Franca. When the *campinos* drive the bulls through the streets to the arena, daredevil townsmen take turns at goading the scrappy longhorns. Each year 3 or 4 townsmen are killed. But the regular arena bullfights were so tame I asked why..."

4 "Let's ride herd on our thirst," my host said, "then I'll explain..." In a patio at his ranch, I felt an old friend had joined us when I saw a bottle of Canadian Club!

5 "Make no mistake," declared my host. "Our bullfighters are as skillful as any, and our bulls are just as savage. But we blunt the bulls' horns before the fights... and no bull is ever killed. We value them too highly." "I'll go along with your sense of values," I commented, "especially when it includes this Canadian Club. It's the one whisky I seem

to find everywhere in the world whenever I ask for the best in the house!" Why this worldwide popularity? Canadian Club is light as scotch, rich as rye, satisfying as bourbon. You can stay with it all evening long... in cocktails before dinner and tall ones after. That's what made Canadian Club the largest-selling imported whisky in the United States.

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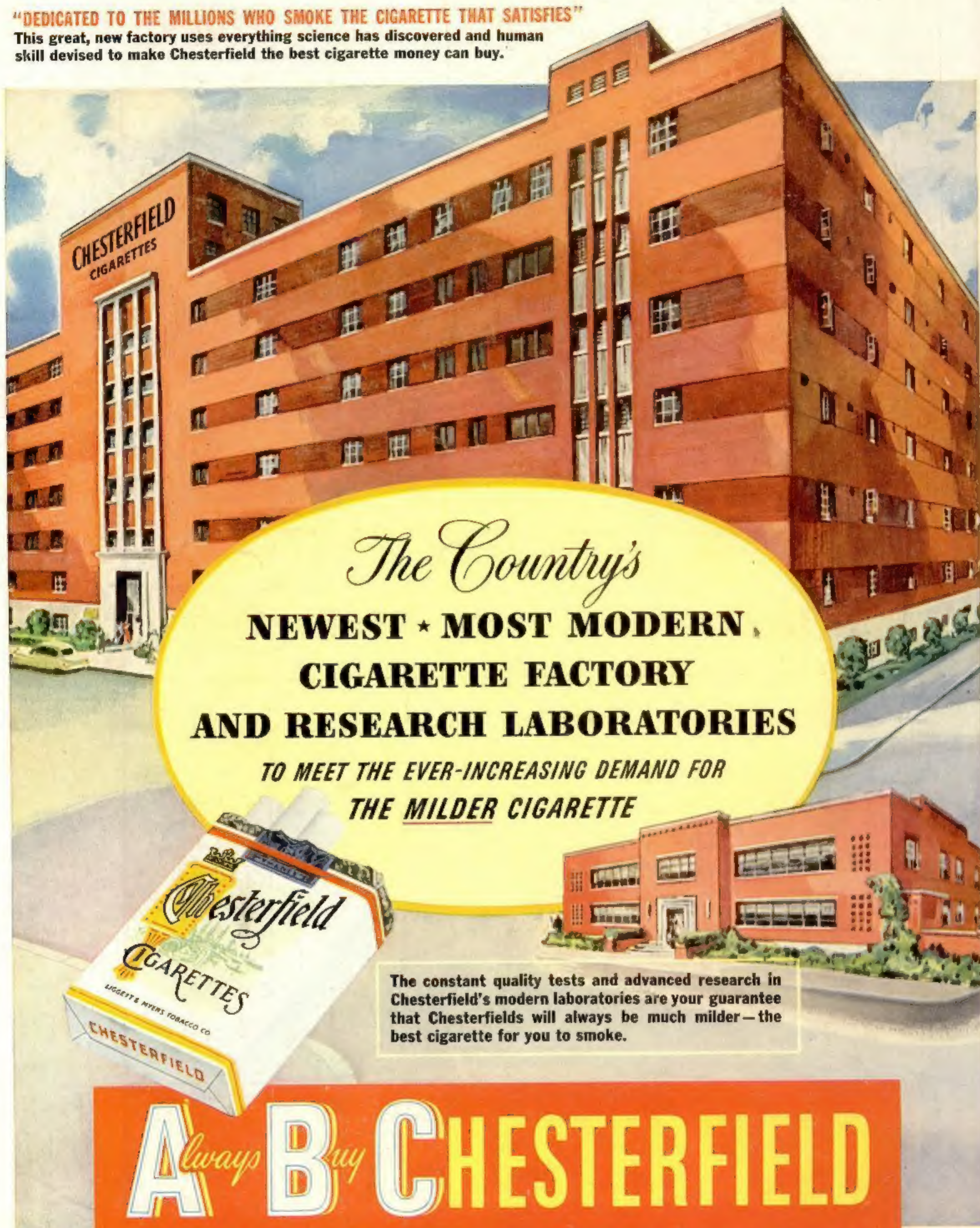
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